WILLKIE FARR & GALLAGHER LLP

1875 K Street, N.W.
Washington, DC 20006-1238

Tel: 202 303 1000
Fax: 202 303 2000

August 6, 2018

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, WC Docket 18-141

Dear Ms. Dortch:

Pursuant to the *Public Notice*, *Extension Order*, and *Protective Order* in the above-captioned proceeding,[1] Granite Telecommunications, LLC ("Granite"), submits for filing the Public version of its Opposition to the petition for forbearance filed by USTelecom – The Broadband Association.[2] Granite has filed the Highly Confidential version of the Opposition by hand with the Office of the Secretary.

Please contact me if you have any questions regarding this submission.

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[1] *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, Public Notice, DA 18-475 (rel. May 8, 2018) ("*Public Notice*"); *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, Order, DA 18-574 (rel. June 1, 2018) ("*Extension Order*"); *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, Order, DA 18-574 (rel. June 1, 2018) ("*Protective Order*").

[2] Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks, WC *Docket* No. 18-141 (filed May 4, 2018) ("Petition").

Respectfully submitted,

_/s/ *Thomas Jones*_____
Thomas Jones
Counsel for Granite

Enclosures

REDACTED – FOR PUBLIC INSPECTION

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks	)	WC Docket No. 18-141

OPPOSITION OF GRANITE TO USTELECOM'S FORBEARANCE PETITION

WILLKIE FARR & GALLAGHER LLP
1875 K Street, NW
Washington, DC 20006
(202) 303-1000

Counsel for Granite Telecommunications, LLC

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OPPOSITION OF GRANITE TO USTELECOM'S FORBEARANCE PETITION

Pursuant to the *Public Notice* and *Extension Order* in the above-captioned proceeding,[1] Granite Telecommunications, LLC, through its undersigned counsel, hereby submits this Opposition to the petition of USTelecom – The Broadband Association ("USTelecom") for forbearance from Section 251(c) unbundling and resale obligations and associated requirements under sections 251 and 252, as well as certain requirements under Sections 271 and 272.[2] As discussed herein, Granite's Opposition focuses specifically on Category 1, to the extent that includes

[1] *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, Public Notice, DA 18-475 (rel. May 8, 2018) ("*Public Notice*"); *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks*, Order, DA 18-574 (rel. June 1, 2018) ("*Extension Order*").

[2] Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks, WC Docket No. 18-141 (filed May 4, 2018) ("Petition").

the avoided-cost resale mandate in Section 251(c)(4)[3] and the associated obligations in Sections 251 and 252.[4]

I. INTRODUCTION AND SUMMARY.

Under Section 10 and Commission precedent, a party seeking forbearance bears the burden of demonstrating that the requirement at issue is not "necessary to ensure that charges, practices, classifications, or regulations" are just, reasonable, and not unjustly or unreasonably discriminatory; that the requirement is not necessary to protect consumers; *and* that forbearance is consistent with the public interest.[5] The relevant legislative history and the terms of the statute show that forbearance from Section 251(c)(4) avoided-cost resale should not be granted except in the rare circumstances in which the limited costs of the requirement outweigh the substantial benefits associated with promoting competition.

In assessing whether such circumstances exist, the Commission must apply its traditional market power standard. As the Commission held in the *Qwest Phoenix Forbearance Order*, that standard is the appropriate analytical framework for assessing whether the level of competition in the provision of legacy telecommunications services necessitates price regulation.[6] That conclusion applies here because the Section 251(c)(4) avoided-cost resale requirement only applies to services classified as telecommunications services, i.e., legacy services.

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[3] 47 U.S.C § 251(c)(4).

[4] *See Public Notice* at 1 (defining Category 1 to include "ILEC-specific unbundling and resale mandates in section 251(c)(3) and (4) and associated obligations under sections 251 and 252").

[5] 47 U.S.C. § 160(a).

[6] *See Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd. 8622, ¶¶ 37-45 (2010) ("*Qwest Phoenix Forbearance Order*"), *aff'd by Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

Under the market power standard, the Commission defines relevant product and geographic markets using well-established methods of analysis and then separately analyzes the level of competition in each defined market. As Dr. Sappington explains in his expert economic analysis submitted by INCOMPAS today, it is critical that the Commission conduct a separate competition analysis in each relevant market. This is because "the nature and intensity of competition in the provision of voice and data services varies widely across geographic regions of the United States."[7] The only way to assess whether avoided-cost resale remains necessary and in the public interest is to account for these differences by using appropriate relevant market definitions.

USTelecom's Petition is facially insufficient because it does not undertake this analysis. As INCOMPAS has shown in its Motion for Summary Denial, filed today, the Petition should be summarily denied because it relies on a nationwide assessment of competition and lacks any information as to the levels of competition in any relevant product or geographic market.

However, should the Commission decline to grant the INCOMPAS Motion, a more comprehensive examination of the marketplace using the traditional market power framework reveals that Section 251(c)(4) resale remains necessary to ensure reasonable prices and to promote competition in the provision of TDM-based business telephone services provided via copper loops (hereafter "traditional TDM service").

First, the Commission should define traditional TDM service as a separate relevant product market. As explained by Larry Antonellis, Granite's Director of Strategic Initiatives, in a declaration filed herewith, business and governmental customers recognize that traditional

[7] Declaration of Dr. David Sappington ("Sappington Decl.") at 3, appended to Opposition of INCOMPAS, FISPA, Midwest Association of Competitive Communications, and the Northwest Telecommunications Association, WC Dkt. No. 18-141 (Aug. 6, 2018).

TDM service includes functionalities that are not provided by any other voice service.[8] Perhaps the most important of these features is that traditional TDM service is self-powered, so that, unlike managed VoIP provided over cable networks, it works even where there is a loss of power at the customer location. The reliability, ubiquity, and affordability of traditional TDM service make it indispensable to businesses and governmental customers in a wide range of circumstances. As a result, demand for the service remains strong among business customers, especially those with many business locations, as well as among governmental customers. For example, and in sharp contrast to the overall decline in the TDM marketplace alleged by USTelecom, the number of Granite customer locations receiving traditional TDM-based business telephone service has generally increased or remained steady every year since 2004.

Second, the Commission should define the relevant geographic market by reference to the choices available to businesses in a community. Under Commission precedent, the critical inquiry looks to the choice of carriers available to a business at its location. Where market conditions are similar in a community, such as a county in which there is one ILEC, the Commission can aggregate customers into a single geographic market to make the analysis more administratively efficient.

Third, the Commission should analyze the level of competition in the provision of traditional TDM service. That analysis will conclusively demonstrate that ILECs possess substantial and persisting market power – virtually always as the sole provider of traditional TDM. Furthermore, because traditional TDM is a low-revenue service, it is uneconomic for Granite or any other competitor to build out network facilities to provide low-bandwidth,

[8] Declaration of Larry G. Antonellis ¶¶ 9, 12-26, appended as Attachment A hereto ("Antonellis Decl.").

traditional TDM services. Given the absence of competition, Granite must purchase traditional TDM from ILECs.

Granite and other competitors rely on avoided-cost resale as a protection against ILEC abuse of market power in two ways. They do so when purchasing traditional TDM service on a wholesale basis pursuant to commercially negotiated agreements. This is because, while not set directly by application of avoided-cost rate regulation, the prices included in commercial wholesale agreements with ILECs are disciplined by the avoided-cost resale requirement. In addition, when ILECs refuse to offer traditional TDM in commercial wholesale agreements or when the pricing or features provided by avoided-cost resale are advantageous, Granite purchases the service under interconnection agreements directly governed by Section 251(c)(4). In both of these contexts, a core effect of the avoided-cost discount is to counter ILEC monopoly power by providing competitive carriers with a market alternative: the ability to rely on Section 251(c)(4) if ILECs demand supra-competitive prices.

Absent this protection, ILEC wholesale prices (including prices established by commercial wholesale agreements) for traditional TDM service will go up by about **[BEGIN HCI] [END HCI]** of Granite's annual recurring revenue, or about **[BEGIN HCI] [END HCI]** per year.[9] If this were to occur, **[BEGIN HCI]**

[END HCI].[10]

[9] Declaration of William P. Zarakas ¶¶ 27-28, appended as Attachment B hereto ("Zarakas Decl."); *see also* Antonellis Decl. ¶ 42.

[10] Antonellis Decl. ¶ 42.

Business customers would be significantly harmed by these effects. Many of those customers are multi-location businesses ("MLBs"). Such customers value Granite's position as a "one-stop shop" because they tend to centrally coordinate procurement of essential services, including telecommunications services. Without these value-added services, MLBs would almost certainly need to coordinate and negotiate with many ILEC vendors. And for each ILEC vendor, customers would need to review and pay separate monthly telephone bills. This would make quality-adjusted prices for traditional TDM services higher than they are today.

Governmental customers would also be harmed. As David Redl, Assistant Secretary for Communications and Information for NTIA, explained in a recent letter to Chairman Pai, federal government agencies that operate in rural areas are frequently unable to negotiate reasonable prices for telephone services. The only competitive constraint on ILECs in these areas is the presence of competitors that rely on Section 251(c)(4) resale. Absent that constraint, the federal government would pay even higher prices and would receive lower quality services.

While competitive carriers and traditional TDM customers would be substantially harmed by forbearance from the Section 251(c)(4) resale requirement, ILECs would not be adversely affected if forbearance is denied. That is because avoided-cost resale ensures that an ILEC makes all profits it would otherwise make when selling traditional TDM services at retail to its own customers. Similarly, denying forbearance from Section 251(c)(4) would not adversely impact investment in the construction of new networks or the provision of new services.

In light of the foregoing, USTelecom has not met, and cannot meet, the statutory standard for forbearance. The Petition should be denied.

II. ARGUMENT.

A. In Order to Meet the Section 10 Forbearance Standard, USTelecom Must Show That There is Sufficient Competition in the Relevant Market to Render Regulation Unnecessary.

To meet the forbearance standard set forth in Section 10 of the Communications Act, USTelecom must show that there is sufficient competition in the provision of traditional TDM services to render the regulation unnecessary. Section 10 establishes a three-prong, conjunctive test.[11] Pursuant to that test, a petitioner must demonstrate that (1) enforcement is "not necessary to ensure that charges, practices, classifications, or regulations" are just, reasonable, and not unjustly or unreasonably discriminatory; (2) enforcement of the regulations and statutory provision is not necessary to protect consumers; *and* (3) forbearance from applying the regulations and statutory provisions is consistent with the public interest.[12]

Section 10 requires the Commission, when making the public interest determination called for under the third prong of the forbearance test, to "consider whether forbearance from enforcing the provision or regulation will *promote* competitive market conditions, including the extent to which such forbearance will *enhance* competition among providers of telecommunications services."[13] In addition, under Commission precedent, affirmed by the D.C. Circuit, "necessary" does not mean "'absolutely required,' 'indispensable,' or 'essential,'" but

[11] *See* 47 U.S.C. § 160(a); *see also Verizon v. FCC*, 770 F.3d 961, 964 (D.C. Cir. 2014) ("The three conditions of § 10(a) are conjunctive and the Commission can 'properly deny a petition for forbearance if it finds that any one of the three prongs is unsatisfied.'") (quoting *CTIA v. FCC*, 330 F.3d 502, 509 (D.C. Cir. 2003)).

[12] 47 U.S.C. § 160(a).

[13] *Id.* § 160(b) (emphasis added).

rather refers "to the existence of a strong connection between what the agency has done by way of regulation and what the agency permissibly sought to achieve with the disputed regulation."[14]

The Commission' *Forbearance Procedures Order* makes clear that the petitioner in a forbearance proceeding bears the burden of proof "at the outset and throughout the proceeding."[15] This "encompasses both the burden of production and the burden of persuasion"[16] and therefore includes "providing convincing analysis and evidence" to support the petition.[17] As explained herein, there is no question that USTelecom has failed to carry its burden.[18]

1. *Forbearance from Section 251(c)(4) is Rarely Appropriate.*

In evaluating USTelecom's case for forbearance, the Commission must assess the costs and benefits of eliminating the requirement for which forbearance is sought. It must do so in

[14] *CTIA v. FCC*, 330 F.3d 502, 509, 512 (D.C. Cir. 2003); *see also id*. at 510 ("[A] measure may be 'necessary' even though acceptable alternatives have not been exhausted.").

[15] *Petition to Establish Procedural Requirements to Govern Proceedings for Forbearance Under Section 10 of the Communications Act of 1934, as Amended*, Report and Order, 24 FCC Rcd. 9543, ¶ 20 (2009) ("*Forbearance Procedures Order*"); *see also id.* ¶¶ 21-23.

[16] *Id.* ¶ 21.

[17] *Id.* ¶ 20.

[18] *See Verizon v. FCC*, 770 F.3d 961, 967 (D.C. Cir. 2014); *Qwest Corp. v. FCC*, 689 F.3d 1214, 1225-26 (10th Cir. 2012) (finding that the petitioner seeking forbearance bears the burden of proof). Today INCOMPAS, the internet and competitive networks association, of which Granite is a member, filed a Motion for Summary Denial in the above-captioned docket, which sets forth the Petition's numerous procedural deficiencies. Granite supports the INCOMPAS Motion. However, should the Commission decline to grant the INCOMPAS Motion, the Commission should deny the Petition with respect to Section 251(c)(4) avoided-cost resale for the substantive reasons set forth herein. Motion for Summary Denial of INCOMPAS, FISPA, Midwest Association of Competitive Communications, and the Northwest Telecommunications Association, WC Dkt. No. 18-141 (Aug. 6, 2018).

light of the purpose of the requirements at issue. This analysis shows that Congress expected that the grant of petitions for forbearance from Section 251(c)(4) would be appropriate only in rare circumstances.

First, Congress ensured that the costs associated with retaining avoided-cost rate regulation under Section 251(c)(4) are minimal. Wholesale rates charged pursuant to Section 251(c)(4) must be set "on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."[19] In stark contrast to the "bottom up" cost-based approach to setting prices for UNEs, the avoided-cost methodology required by Section 251(c)(4) is a "top down" approach that ensures that ILECs earn the same profit levels as they do when they sell services at retail. In addition, providing access to a finished product entails less administrative cost and disruption than providing access to a network element. As Senator Inouye explained during the legislative debate regarding the avoided-cost resale in the 1996 Act, Congress sought to "balance[] the interests . . . in permitting the [ILECs] to recover their costs and *indeed to make a reasonable profit* while assuring that a viable resale business can jump-start local competition."[20] Congress was "not asking [ILECs] to subsidize their competitors."[21] For that reason, "resale prices must reflect the very substantial savings" that ILECs realize because they are "relieved of the obligation to provide a wide variety of services to the retail customer, such as billing and

[19] 47 U.S.C. § 252(d)(3).

[20] 141 Cong. Rec. S8369 (daily ed. June 14, 1995) (Amendment No. 1303) (emphasis added).

[21] *Id.*

maintenance, that add to the cost of service" as well as "the costs associated with marketing, advertising, and collecting on receivables[.]"[22]

Second, avoided-cost rate regulation promotes Congress's objective of enabling competition in historically closed markets. In enacting the 1996 Act, Congress "called for ratemaking different from any historical practice, to achieve the entirely new objective of uprooting the monopolies that traditional rate-based methods had perpetuated."[23] In enacting Section 251(c)(4), Congress understood that ILECs had an effective monopoly over traditional TDM service. Congress also understood that the greater bargaining leverage held by ILECs required a regulatory solution that cut through delay tactics and burdensome regulatory proceedings, which is why it enacted a specific avoided-cost methodology to be used to set wholesale rates prospectively.[24]

Third, the terms of Section 251(c)(4) confirm that Congress expected that avoided-cost resale would be retained in most circumstances, but especially where ILECs continue to possess substantial market power. For example, the scope of the statutory resale requirement is broad and specifies no duration. Section 251(c)(4) applies to "any" telecommunications services ILECs offer to retail customers, without qualification and without regard to the level of competition in the relevant market. In contrast to Section 251(c)(3) unbundling, there is no requirement that the Commission conclude that competitors are impaired in the absence of avoided-cost resale. The logical inference is that Congress expected that the Section 251(c)(4)

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[22] *Id.*

[23] *Verizon Commc'ns, Inc. v. FCC*, 535 U.S. 467, 488 (2002) (citing H.R. Conf. Rep. No. 104-230, at 113 (1996)).

[24] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Services Providers*, First Report and Order, 11 FCC Rcd. 15499, ¶¶ 47, 55, 139 (1996).

avoided-cost resale mandate would remain in place even where ILECs have been relieved of the obligation to provide access to UNEs.[25] It is difficult to imagine a situation in which forbearance would be appropriate where the ILECs retain market power.

2. *The Commission Must Apply its Traditional Market Power Framework*.

Where a petitioner relies on the presence of competition to justify its request for forbearance from price regulation of legacy services, as USTelecom does in the instant Petition, the Commission conducts a competition analysis to determine whether the overall benefits of retaining the regulation outweigh the costs in the relevant markets.[26] The Commission should do the same here.

The Commission relied on its traditional market power framework in the *Qwest Phoenix Forbearance Order* to conclude that competition in the relevant markets was not sufficient to justify granting Qwest's petition for forbearance from the Section 251(c)(3) unbundling

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[25] Section 251(d)(2) of the Act directs the Commission to consider, "at a minimum," whether access to an ILEC's network elements is "necessary" and whether failure to provide a non-proprietary element on an unbundled basis would "impair" a requesting carrier's ability to provide service. Accordingly, the Commission determines whether the absence of access to an ILEC's network element would pose one or more barriers that would make entry by a reasonably efficient competitor uneconomic. *See Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 1 (2005), *aff'd*, *Covad Commc'ns Co. v. FCC*, 450 F.3d 528 (D.C. Cir. 2006).

[26] In the *Qwest Phoenix Forbearance Order*, the FCC "return[ed] to a traditional market power framework, which the Commission established in the *Competitive Carrier* proceedings and developed further in subsequent decisions to evaluate competition in telecommunications markets in forbearance proceedings." *Qwest Phoenix Forbearance Order* ¶ 37. *See also, e.g.*, *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd. 5662, ¶¶ 23-26 (2007); *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18290, ¶¶ 20-23 (2005); *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18433, ¶¶ 20-23 (2005); *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, Order, 11 FCC Rcd. 3271, ¶¶ 38-73 (1995).

requirements in the Phoenix MSA.[27] As the Commission explained, the traditional market power framework, which "is the precise inquiry specified in Section 10(a)(1)" of the Act, is "designed to identify when competition is sufficient to constrain carriers from imposing unjust, unreasonable, or unjustly or unreasonably discriminatory rates, terms, and conditions, or from acting in an anticompetitive manner."[28] It therefore is the analytical framework that "is better suited to analyzing claims that competition in the legacy services market is sufficient to satisfy the three-part section 10 forbearance criteria[.]"[29]

In applying its traditional market power analysis in the *Qwest Phoenix Forbearance Order*, the Commission first used "economically sound standards"[30] to define the relevant product markets – including separate retail and wholesale markets – and the relevant geographic markets.[31] The Commission then identified the participants in each relevant market and evaluated the levels of actual competition therein, limiting its analysis to competition from providers using their own facilities to offer service.[32] In doing so, the Commission took into account the relevant barriers to entry and "evaluate[ed] whether potential entry could occur in a timely, likely, and sufficient manner to counteract the exercise of market power by [the

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[27] The Commission also declined Qwest's request for forbearance from the following requirements, which, unlike the Section 251(c)(3) unbundling requirement, are not core local competition provisions of the 1996 Act: (1) dominant carrier regulation of switched access service, and (2) certain *Computer III* requirements, including comparably efficient interconnection and open network architecture requirements.

[28] *See Qwest Phoenix Forbearance Order* ¶ 37.

[29] *Id*.

[30] *Id.* n.169.

[31] *Id.* ¶¶ 46, 64-65.

[32] *See, e.g., id.* ¶ 71 (counting as competitors in the wholesale loop market those service providers that have "constructed their own last-mile connections to enterprise customers, and . . . offer these services to competitors as wholesale inputs").

petitioner]."[33] As the Commission explained, "[b]y using the more comprehensive antitrust-based analysis the Commission frequently has used in past proceedings, and that the nation's antitrust agencies regularly use to measure competition, we ensure that competition in downstream markets is not negatively affected by premature forbearance from regulatory obligations in upstream markets."[34]

USTelecom's attempts to avoid application of the traditional market power framework, including the use of appropriately granular relevant markets, have no merit. For example, USTelecom contends that the *USTelecom 2015 Forbearance Order* supports its request for "nationwide" forbearance from the Section 251(c)(4) resale obligation without regard to differences among relevant markets.[35] But that order did not grant broad forbearance from any of the core local competition provisions of Section 251.[36] Nor did the Commission offer any basis in that order for concluding that the Commission should ignore key differences among relevant markets for Category 1 services. As Dr. Sappington explains in the paper filed by INCOMPAS, that would be extremely bad policy: the Petition "fails to acknowledge the wide variation in competitive conditions across the nation."[37]

USTelecom also relies on the *2015 Open Internet Order* to argue that no analysis of local markets is needed to justify its request for forbearance, but the *2015 Open Internet Order* is

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[33] *Id.* ¶ 42.

[34] *Id.* ¶ 40.

[35] *See* Petition at 21-22.

[36] *See generally Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Enforcement of Obsolete ILEC Legacy Regulations That Inhibit Deployment of Next-Generation* Networks, Memorandum Opinion and Order, 31 FCC Rcd. 6157, ¶ 7 (2015) ("*USTelecom 2015 Forbearance Order*").

[37] Sappington Decl. at 2.

entirely distinguishable from the instant case. The *2015 Open Internet Order* concerned a Commission-initiated process and not the evaluation of a private petition, a distinction that the Commission itself emphasized.[38] In addition, the Commission recognized in the *2015 Open Internet Order* that it is critical to analyze competition when a request for forbearance is based on a claim that competition prevents the petitioner from exercising market power. As the Commission explained, in contrast to its forbearance analysis in the *2015 Open Internet Order*, "the Commission in the *Qwest Phoenix Order* was addressing a petition where the rationale for forbearance was *premised* on the state of competition."[39] What is more, "a different analysis" than the traditional market power analysis "may apply when the Commission addresses [a forbearance petition involving] advanced services, like broadband services, instead of a petition addressing legacy facilities."[40] This is so because (1) it may be difficult to correctly assess current and potential competition in dynamic and evolving markets[41] and (2) Section 706 of the 1996 Act "explicitly directs the FCC to 'utiliz[e]' forbearance to 'encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans'" and allows the Commission to "balance the future benefits [of forbearance] against short term impact."[42] None of those considerations is relevant to traditional TDM service. Accordingly, the *2015 Open Internet Order* does not alter the analytical framework required here.

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[38] *See Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, ¶ 439 (2015) ("*Open Internet Order*").

[39] *Id.* ¶ 439. (emphasis added).

[40] *Qwest Phoenix Forbearance Order* ¶ 39.

[41] *Id.*

[42] *EarthLink, Inc. v. FCC*, 462 F.3d 1, 8-9 (D.C. Cir. 2006).

B. The Commission Should Deny the Petition Insofar as it Seeks Forbearance from Enforcing Section 251(c)(4) Resale to Traditional TDM Services.

1. *USTelecom's Petition is Insufficient on its Face.*

On the face of the Petition, USTelecom has failed to demonstrate that Section 251(c)(4) resale is no longer necessary or that forbearance from that requirement would be in the public interest with regard to traditional TDM services. In fact, as INCOMPAS has shown, the Petition is so bereft of factual support for and analysis of USTelecom's claim that competition renders Section 251(c)(4) resale unnecessary that it should be summarily denied.[43] For example, the small amount of data offered by USTelecom in support of its request for forbearance from Section 251(c)(4) resale is so highly aggregated that it reveals nothing about the level of competition in any product or geographic market.[44] USTelecom's Petition also says nothing about the harm that would befall customers that continue to utilize resold traditional TDM services.[45] Moreover, USTelecom provides no evidence to support its assertion that ILECs have the incentive to offer traditional TDM services at wholesale on reasonable rates, terms and conditions.[46]

2. *Section 251(c)(4) Resale Continues to Be Necessary to Ensure Reasonable Prices and to Promote Competition in the Provision of Traditional TDM.*

A more comprehensive examination of the marketplace using the Commission's traditional market power framework demonstrates that Section 251(c)(4) resale continues to be

[43] INCOMPAS Motion for Summary Denial at 21.

[44] *See id.*

[45] *See id.*

[46] *See id.*

necessary to ensure reasonable prices and to promote competition in the provision of services that rely on traditional TDM service.

a. Traditional TDM service is a relevant product market.

Under its traditional market-power test, the Commission begins by defining relevant product markets. A relevant product market is "a group of competing products for which a hypothetical monopoly provider of the products would profitably impose at least a small but significant and nontransitory' increase in price."[47] Accordingly, where, in the face of a 'small but significant increase in the price of service A, a customer would be unlikely to switch to service B, it is appropriate to conclude that services A and B belong in different product markets.[48]

Employing this standard, traditional TDM service constitutes a relevant product market. Traditional TDM service has a unique set of service characteristics for which other telephone services available to business customers do not constitute an economic alternative. For example, traditional TDM service lines are self-powered. They therefore continue to operate even in the event of power outages, without the need for additional fail-safes such as generators or batteries.[49] Other telephone services available to business and governmental users do not provide this feature. For example, managed VoIP provided by cable companies over networks

[47] *Qwest Phoenix Forbearance Order* n.141 (citation omitted).

[48] *See id*. ¶ 48.

[49] Antonellis Decl. ¶ 15.

that use TCP/IP technology is not self-powered and therefore is less reliable.[50] "Best effort" managed VoIP is also generally less secure than traditional TDM service.[51]

Traditional TDM service also offers ubiquity and reliability unavailable from wireless services. Fixed wireless services are not broadly deployed and thus are unavailable at most customer locations.[52] They also suffer from line-of-sight restrictions and limited range in areas where they have been deployed.[53] Additionally, both fixed and mobile wireless services do not provide sufficient reliability to meet the needs of customers who rely on traditional TDM.[54] Wireless signal "dead zones" are widespread, and wireless service may be overloaded and inoperable during emergencies or at unexpected peak times.[55] Mobile wireless service also lacks functionalities provided via traditional TDM, such as faxing and "rollover" lines for business use, which customers require.[56]

Business customers rely on traditional TDM service for a wide range of applications. Many Granite customers rely on traditional TDM service as a back-up means for critical communications, even when they also use IP-based services, including VoIP, at the same locations.[57] National pharmacy chains, for example, suffer from outages to, or encounter access issues with, the "best effort" IP access services they use at one or more of their thousands of

[50] *Id.* ¶ 12. This defect cannot be cured in any material or cost-effective way. *Id.*

[51] *Id.*

[52] *Id.* ¶ 13.

[53] *Id.*

[54] *Id.* ¶¶ 13, 26.

[55] *Id.* ¶ 13.

[56] *Id.*

[57] *Id.* ¶¶ 16-17, 19.

business locations on a daily basis,[58] with one pharmacy customer of Granite's averaging **[BEGIN HCI]** **[END HCI]** outages per day across its over **[BEGIN HCI]** **[END HCI]** locations.[59] Traditional TDM service ensures that they can nonetheless continuously engage in critical business functions, including accessing servers that store customer information, operating point-of-sale equipment, communicating with hospitals and doctors, and filling prescriptions, even when their IP networks encounter service impairments.[60]

The provision of reliable connectivity has special importance for those businesses that rely on traditional TDM service to ensure the operation of critical systems such as medical alerts, fire/sprinkler monitoring, gas pipeline monitoring, bank vault or burglar alarms, and elevators that require reliable back-up systems for unexpected failures.[61] Property management companies, for example, require reliable fire/sprinkler, burglar, and elevator alarms across the wide range of buildings they manage,[62] while banks require the self-powering capabilities of traditional TDM service to ensure that bank vaults remain secure, and that critical banking operations such as such as clearinghouses, ATMs, and electronic transfer capabilities continue in the event of a power outage.[63]

Furthermore, Granite's customers are frequently required by regulation to provide services via copper-based facilities. For example, state and local regulations require business to

[58] *Id.* ¶ 16.

[59] *Id.* ¶ 17.

[60] *Id.* ¶ 16.

[61] *Id.* ¶¶ 18-19.

[62] *Id.* ¶ 18.

[63] *Id.* ¶ 19.

maintain plain-old telephone (or POTS) lines (i.e., traditional TDM service) for the transmittal of emergency calls.[64] In addition, banks must comply with Office of the Comptroller of the Currency regulations requiring the adoption of security procedures to discourage robberies, burglaries, and larcenies, including implementation of an alarm system that promptly notifies law enforcement, and to assist in the identification and prosecution of persons who commit such acts.[65]

Traditional TDM service particularly satisfies the needs of government agencies. Certain government agencies have thousands of locations across the country, many of which are located in rural areas.[66] Some government agencies and public institutions face significant budget pressures to avoid incurring the expenses (e.g., due to the purchase of new equipment) associated upgrading from traditional TDM service to VoIP.[67] Other agencies must operate essential applications and services requiring reliability, availability, and compatibility that can currently

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[64] *Id.* ¶ 18 & n.2 (citing Mich. Admin. Code R. 400.8164(1) (requiring child care centers to have operable landline telephone that does not require electricity to operate); N.Y. Comp. Codes R. & Regs. tit. 14, § 635-7.3(c)(6) (requiring residential and non-residential facilities receiving funding or certification by the Office for People With Developmental Disabilities to have landline telephone service that can function during power outages, unless cellular telephone service is available at the location at all times); 22 Va. Admin. Code § 40-111-330(A) (requiring all family day homes to have an operable landline telephone that does not require electricity to operate); Fire Code for Village of Libertyville, IL, Sec. 607.8.5, http://www.libertyville.com/DocumentCenter/View/123/fire_code ("All emergency telephone lines from the elevator to the Libertyville Dispatch Center shall be transmitted over POTS lines and not VOIP lines.").

[65] Antonellis Decl. ¶ 19; 12 C.F.R. §§ 168.1(a), 168.3(a) (requiring the adoption of security procedures to discourage robberies, burglaries, and larcenies and to assist in the identification and prosecution of persons who commit such acts) & 168.3(a) (requiring procedures that ensure the safekeeping of currency and similar valuables at all times, and implementation of alarm system that promptly notifies law enforcement in the event of a robbery or burglary)).

[66] *Id.* ¶ 23.

[67] *See, e.g., id.*

only be achieved by traditional TDM service.[68] The FAA, for example, requires traditional TDM services to operate its flight monitoring system, the National Airspace System ("NAS"), and to ensure safe and efficient travel in the United States and over large portions of the world's oceans.[69]

The rate at which customers purchase traditional TDM service quantifies the effect of Granite's customers' preference for the features and functionalities provided by that service and, in some cases, their legal obligation to purchase the service. Today, traditional TDM-based business telephone service is purchased by **[BEGIN HCI] [END HCI]** of Granite's customers,[70] and **[BEGIN HCI] [END HCI]** of Granite's lines come from customers requiring traditional TDM-based business telephone service at ten or more locations.[71] Contrary to USTelecom's assertion, the use of traditional TDM-based business telephone service continues to be significant.[72] Indeed, as the following chart demonstrates, the number of Granite customer locations receiving traditional TDM service has increased or remained steady every year since 2004, while the total number of traditional TDM-based business telephone lines has increased or remained steady every year except 2016-2017.[73]

[68] *Id.* ¶ 26.

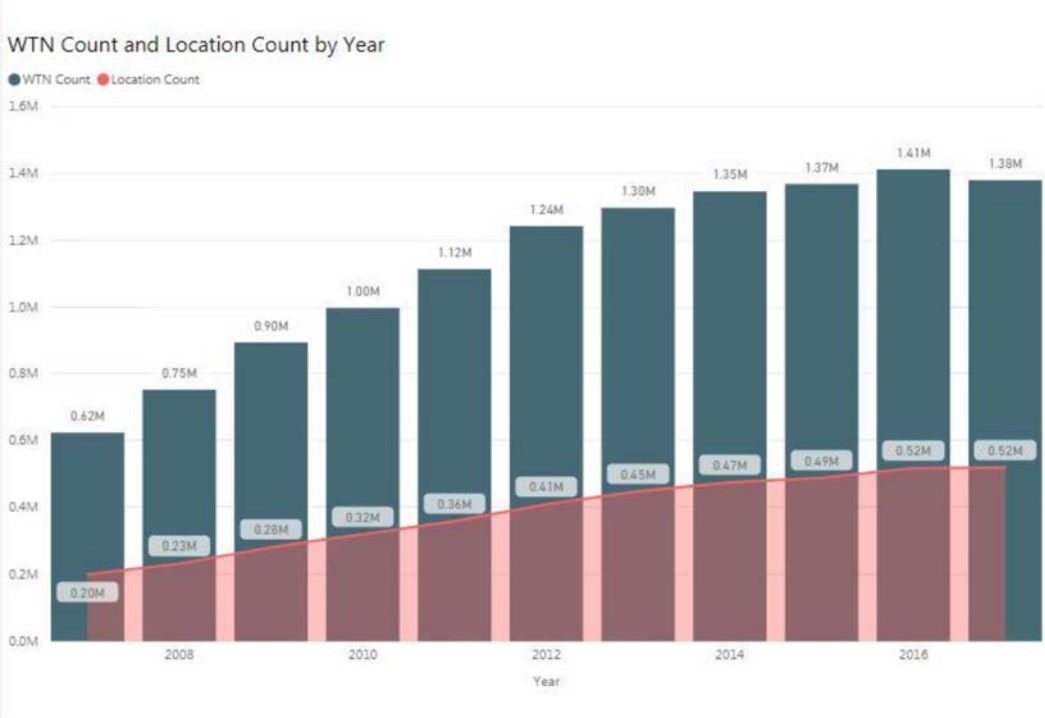
[69] *Id.*

[70] *Id.* ¶ 14.

[71] Zarakas Decl. ¶ 9.

[72] *See* UST Petition at 7-8.

[73] Antonellis Decl. ¶ 14.



In sum, there is no question that a large number of business and governmental customers view traditional TDM service as a unique product for which other voice services are not a substitute. Those customers would almost certainly continue to purchase traditional TDM service even if the price of that service were increased by a small but significant and nontransitory amount.[74] It must therefore be classified as a relevant product market for purposes of this proceeding.

b. The relevant geographic market reflects the choices available at business locations.

The Commission defines the relevant geographic market as "the region where a hypothetical monopolist that is the only producer of the relevant product in the region would profitably impose at least a 'small but significant and nontransitory' increase in the price of the

[74] *Qwest Phoenix Forbearance Order* n.141.

relevant product, assuming that the prices of all products provided elsewhere do not change."[75] That is, if a customer at location A cannot switch to service available at location B in response to a price increase at location A, then location B is not in the same geographic market as location A.[76] For traditional TDM service, the relevant geographic market is defined by the choices available at a particular business location.[77] For administrative purposes, however, the Commission can aggregate customer locations into larger geographic units of analysis where the customer locations are subject to similar market conditions, such as in a community served by a single ILEC.

c. ILECs continue to have overwhelming market power in the provision of traditional TDM service.

After defining relevant markets, the Commission assesses the level of competition in each relevant market, taking into account entry barriers and the extent to which competitive entry would be timely, likely, and sufficient. Here it is clear that ILECs possess monopoly market power in the supply of traditional TDM service.

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[75] *Id.* n.142 (quoting *Application of EchoStar Communications Corp, General Motors Corporation, and Hughes Electronics Corporation (Transferors) and EchoStar Communications Corporation (Transferor)*, Hearing Designation Order, 17 FCC Rcd. 20559¶ 117 (2002)) (citations omitted). *See also DOJ/FTC Horizontal Merger Guidelines*, § 4.2 (2010), https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf.

[76] *Qwest Phoenix Forbearance Order* n.142 (quoting *Application of EchoStar Communications Corp, General Motors Corporation, and Hughes Electronics Corporation (Transferors) and EchoStar Communications Corporation (Transferor)*, Hearing Designation Order, 17 FCC Rcd. 20559¶ 117 (2002)) (citations omitted). *See also DOJ/FTC Horizontal Merger Guidelines*, § 4.2 (2010), https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf.

[77] *See Qwest Phoenix Forbearance Order* ¶ 64 ("Consistent with Commission precedent, we reaffirm that each customer location constitutes a separate relevant geographic market, given that a customer is unlikely to move in response to a small, but significant and nontransitory increase in the price of the service.").

First, ILECs own the copper-based infrastructure used to provide it.[78] Indeed, Granite must purchase traditional TDM from ILECs because no provider other than the ILEC in its home territory has the physical infrastructure in place to provide traditional TDM to and from every MLB's locations.[79] *Second*, it is uneconomic for Granite or any other competitor to build out network facilities to provide low-bandwidth services with the specific characteristics of traditional TDM service. Customers have demonstrated no desire to pay for Granite, or another competitive provider, to dig to them or to buy expensive equipment necessary to make traditional TDM available.[80] There is no analysis to support a view that competitive carriers will today build copper-based facilities to service demand for low-bandwidth traditional TDM service.[81]

Primarily, this is because traditional TDM is a low-revenue service and, as explained in the accompanying Zarakas Declaration, does not support the economics necessary to justify the build-out of a full network to meet the demand of most customers.[82] As Mr. Zarakas explains, such buildouts are likely to cost more than the expected generated revenue to be received.[83] While many of Granite's customers subscribe to hundreds or thousands of business lines overall, on average, they use only three or four lines per location.[84] As demonstrated in Table 5 of the

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[78] Antonellis Decl. ¶ 41.

[79] *Id.* ¶ 29. Cox had deployed traditional circuit-based telephony in twelve of its markets as of 2006, but it is not easily ascertained from the public record whether or to what extent Cox provides traditional TDM services today. *See* Cox Communications, Inc., Annual Report (Form 10-K) at 4 (Mar. 29, 2006).

[80] *Id.* ¶ 29.

[81] *Id.* ¶ 30; Zarakas Decl. ¶¶ 15-17.

[82] Zarakas Decl. ¶ 15.

[83] *Id.*; *see* Antonellis Decl. ¶¶ 29-31.

[84] Zarakas Decl. ¶ 16.

Zarakas Declaration, **[BEGIN HCI]**

[END HCI].[85] **[BEGIN HCI]**

. **[END HCI]**[86] Further, customer locations typically do not have other tenants that could be served via newly-deployed transmission facilities.[87] As Mr. Zarakas concludes, the small number of lines per location "ensur[es] that building out facilities to these locations [are] financially infeasible."[88]

Granite's own market analysis confirms this conclusion. In 2016, Granite conducted an "on the ground" survey of a traditional TDM customer's **[BEGIN HCI]**

[END HCI], which mainly focused on the availability of cable-based internet options.[89] Granite found that non-ILEC competitors, including cable companies, either had deployed or could deploy transmission to **[BEGIN HCI]** **[END HCI]** of the locations studied.[90] That is, ILECs provided the only facilities-based connection to **[BEGIN HCI]** **[END HCI]** of these customer locations.[91]

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[85] *Id.*

[86] *Id.* ¶ 30.

[87] *Id.*

[88] *Id.* ¶ 16.

[89] Antonellis Decl. ¶ 31; Zarakas Decl. ¶ 18.

[90] Antonellis Decl. ¶ 31; Zarakas Decl. ¶ 18.

[91] Antonellis Decl. ¶ 31; Zarakas Decl. ¶ 19. In addition, as Mr. Zarakas explains, even if other voice services, such as managed VoIP offered by cable companies, were substitutes for traditional TDM service, the ILECs would still possess market power in the relevant product market for business voice services. Zarakas Decl.¶¶ 18-19.

d. Avoided-cost resale is necessary to ensure reasonable prices and promote competition.

In light of the ILECs' market power in the provision of traditional TDM service, competitors like Granite have no choice but to purchase that service from the ILECs. Competitors use these services to compete with the ILECs in the sale of retail voice services to MLBs.[92] Because the ILECs are simultaneously acting as suppliers and competitors to CLECs, they have a direct economic incentive to charge companies like Granite high prices for wholesale services needed to provide traditional TDM.[93] The Section 251(c)(4) avoided-cost resale requirement protects competitors, and their customers, against ILEC abuse of their market power. Granite's experience illustrates this effect.

Granite obtains wholesale voice service from ILECs primarily in two ways. The first way is to purchase local voice service through commercial wholesale agreements with the ILECs.[94] Most of Granite's leasing arrangements with ILECs are through such commercial wholesale agreements.[95] The second way is to purchase wholesale services from ILECs at avoided-cost resale rates in interconnection agreements subject to state supervision, as required by Sections 251(c)(4) and 252.[96] Generally, ILECs voluntarily decide what kinds of retail plans to offer in a state. Avoided-cost resale accounts for roughly **[BEGIN HCI]** **[END HCI]** of TDM voice lines provided by Granite.[97]

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[92] Antonellis Decl. ¶¶ 28, 31.

[93] *Id.* ¶ 31.

[94] Antonellis Decl. ¶ 34.

[95] Zarakas Decl. ¶ 22.

[96] Antonellis Decl. ¶ 39.

[97] *Id.* ¶ 40.

While the prices contained in Granite's commercial wholesale agreements with ILECs are not set directly by application of avoided-cost rate regulation, the existence of the option of avoided-cost resale effectively limits the ability of any particular ILEC to demand higher rates under commercial wholesale agreements.[98] A core effect of the avoided-cost discount is to counter the monopoly power of the ILEC by providing competitive carriers with a market alternative, namely the ability to rely on Section 251(c)(4) if ILECs demand supra-competitive prices for their commercial wholesale agreements. This conclusion is supported by basic economics: when two parties bargain, they always take into account what happens if negotiations fail. Suppose a prospective vacationer is seeking a lower price for the rental of a beach house, but the owner has a long waiting list of other would-be vacationers. In that case, the owner will be less willing to make price concessions; he or she holds a stronger bargaining position. Contrast that to the owner of a house that has sat unsold for months, who has a weaker bargaining position when a prospective buyer finally surfaces.[99]

That ILECs have the incentive and ability to exercise that market power is supported by numerous real-world examples. **[BEGIN HCI]**

. **[END HCI]**[100] **[BEGIN HCI]**

. **[END HCI]**[101] **[BEGIN HCI]**

[98] *Id.* ¶ 34.

[99] For a more technical explanation, *see* Zarakas Decl. ¶¶ 22-23 & nn.12-13.

[100] Antonellis Decl. ¶ 37.

[101] *Id.*

. **[END HCI]** [102]

In contrast, where the safeguard of avoided-cost resale is absent, Granite is unable to counteract against unreasonable demands. For example, when Granite has attempted to resell services to customers located in the service territories of ILECs that are not subject to Section 251(c)(4) due to the rural ILEC exemption in Section 251(f), **[BEGIN HCI]**

[END HCI].[103]

Federal agencies and their contractors, despite generally being well-positioned to negotiate telecommunications services contracts, suffer from a similar inability to negotiate for contractual provisions that adequately serve federal users' needs when carriers to do not face adequate competitive pressures.[104] Indeed, for one of Granite's large public institution customers, which has locations in many rural areas, Granite must rebill the customer for traditional TDM at **[BEGIN HCI]** **[END HCI]** locations, which are serviced by **[BEGIN HCI]** **[END HCI]** ILECs.[105]

[BEGIN HCI]

[102] Zarakas Decl. ¶¶ 24-25.

[103] Antonellis Decl. ¶ 38.

[104] Letter from David J. Redl, Assistant Secretary for Communications and Information, NTIA, to Ajit Pai, Chairman, FCC, WC Docket No. 17-84, at 2 (July 19, 2018) ("July 19 NTIA Letter").

[105] Antonellis Decl. ¶ 38.

. **[END HCI]** [106]

In addition, elimination of the avoided-cost resale requirement will directly lead to higher prices insofar as Granite purchases services under interconnection agreements pursuant to Section 251(c)(4). Although **[BEGIN HCI]** **[END HCI]** of the TDM lines it procures are supplied under avoided-cost resale, sometimes Granite is able to get a better rate for avoided-cost resale than it is able to obtain through a commercial wholesale agreement.[107] For example, some large, independent and rural ILECs simply refuse to enter into commercial wholesale agreements.[108] This means that avoided-cost resale is the only practicable and economically-efficient means by which Granite can obtain the wholesale voice services needed to provide traditional TDM from these ILECs.[109] Moreover, Granite and similarly situated competitors sometimes prefer avoided-cost resale over other forms of traditional TDM because it is available with product features, such as Centrex functionality, that are not available through commercial wholesale contracts because equipment used to provide these services is located at the ILEC's central office and not at customers' business locations.[110] For all of these services,

[106] *Id.*

[107] *Id.* ¶¶ 41-42.

[108] *Id.* ¶ 42.

[109] *Id.*

[110] *Id.* ¶ 10.

Granite would experience an immediate price increase, likely to the level of retail prices, if the protection of Section 251(c)(4) is eliminated.

Thus, if Section 251(c)(4) resale obligations are eliminated, the prices ILECs charge Granite in commercial wholesale agreements as well as in interconnection agreements governed directly by Section 251(c)(4) will likely increase to effectively reach the ILECs' retail prices to their own customers.[111] This combined financial impact on Granite would be substantial. For example, Mr. Zarakas estimates that, absent the protection of Section 251(c)(4), the prices ILECs charge Granite for traditional TDM service will go up by about **[BEGIN HCI] [END HCI]** of Granite's annual recurring revenue, or about **[BEGIN HCI] [END HCI]** per year.[112]

e. Other statutory provisions would not serve as a viable substitute for Section 251(c)(4).

USTelecom argues that the elimination of Section 251(c)(4) resale will not have a material adverse effect on competition because Section 251(b)(1)[113] will continue to require all LECs to resell local exchange services without unreasonable or discriminatory conditions or limitations, and because Sections 201 and 202 of the Communications Act, in turn, further ensure that all carriers' practices are just, reasonable, and not unjustly or unreasonably discriminatory.[114] There is no basis for these assertions.

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[111] *Id.* ¶¶ 41-42; Zarakas Decl. ¶¶ 21-26.

[112] Zarakas Decl. ¶¶ 27-28; Antonellis Decl. ¶ 41-42. Granite would not realize a price increase following an elimination of avoided-cost resale rates under Section 251(c)(4) of the Act until its commercial wholesale contracts expire.

[113] 47 U.S.C. § 251(b)(1).

[114] Petition at 29.

First, Section 251(b)(1) does not require that the resale rate take into account the costs that ILECs avoid by selling to a competitive LEC, rather than a retail customer. As a result, there is a significant risk that ILECs would be able to charge above-cost wholesale rates that have the effect of placing competitors like Granite in a price squeeze.

Second, Section 251(b)(1)'s resale requirement places the burden of demonstrating harm on competitive providers like Granite that, of course, lack a full understanding of the ILEC cost structure and private deals that it has struck and have structurally weaker bargaining power than the ILECs.

Third, Section 251(b)(1)'s resale requirement lacks a methodology for calculating the resale rate and would require that *post hoc* enforcement proceedings be instituted at the state or federal level whenever Granite believes it is being treated unfairly. The cost, uncertainty, and delay associated with those proceedings would make them highly ineffective means of resolving price disputes. Moreover, delay would also distort competition because Granite would be hampered in responding to customer requests for proposals to provide service in a timely fashion.

Fourth, USTelecom fails to acknowledge that the Commission has relied on the continued availability of "cost-based rates available under section 251 and through resale" – the very Category 1 requirements from which USTelecom seeks forbearance in the instant Petition – to justify forbearance from Section 271 checklist items.[115]

It also bears emphasis that the role of the states as defined in the statute has been and remains critical to ensuring an efficient means of bringing competition to retail customers through avoided-cost discounts. Resale under Section 251(b)(1) would be a far less effective

[115] *USTelecom 2015 Forbearance Order* ¶ 32.

mechanism for state-supervised competition than the current regulatory regime. Importantly, Section 252 grants states the authority to apply their expertise in local competition matters to review and approve interconnection agreements that encompass avoided-cost resale provisions.[116] Absent this requirement, there will no longer be informed arbiters that have a comparative advantage in analyzing the competitive conditions present in each state in which an ILEC offers avoided-cost resale and are empowered with the ability to enforce avoided-cost resale obligations.

f. Elimination of Section 251(c)(4) resale would harm competition.

Elimination of avoided-cost resale would harm competition and consumer welfare in a number of ways. Wholesale rates will increase. Wholesale prices set under the avoided-cost methodology would no longer serve as a constraint on ILECs increasing pricing in commercial wholesale agreements with Granite.[117] Relatedly, Granite's wholesale line acquisition costs would also increase as the acquisition cost of its next best alternative increases.[118] USTelecom recognizes these negative effects on Granite; it would not have petitioned for forbearance if it were otherwise.[119]

Such line procurement cost increases for competitive carriers like Granite would lead to a number of additional expected effects. *First,* **[BEGIN HCI]**

[END

[116] 47 U.S.C. § 252(e).

[117] Zarakas Decl. ¶ 26.

[118] *Id.* ¶ 27.

[119] *Id.*

HCI].[120] *Second,* **[BEGIN HCI]**

[END HCI].[121] *Third,*

[BEGIN HCI]

[END HCI].[122]

g. Forbearance would harm business customers.

Business customers would experience significant harm if competitors like Granite were ill-equipped to continue to serve them. Granite and other similar competitors that resell traditional TDM service cater to the specific needs of MLBs, each of which requires seamless communications among and between the MLB's locations and between those locations and the MLB's customers.[123] Granite is willing to commit to long-term pricing commitments of three to five years required by MLBs. In order to ensure its ability to meet long-term commitments to its MLB customers, Granite enters into long-term fixed contracts with ILECs.[124] Granite adds substantial value to the voice services it resells pursuant to these arrangements by providing, among other things, an integrated billing functionality, customer support, and technical

[120] *Id.* ¶ 29; Antonellis Decl. ¶ 42.

[121] Zarakas Decl. ¶ 29.

[122] *Id.*

[123] Antonellis Decl. ¶ 6.

[124] *Id.* ¶ 7.

assistance.[125] ILECs, on the other hand, cannot provide such value, as they generally limit their serviced offerings to their historical footprint.[126]

Business customers highly value these "one-stop shop" service functionalities because they ensure the availability of high-quality, ubiquitous voice service at a lower cost than would otherwise be available to MLB customers. Granite coordinates with ILECs for the provision of telephone services to its customers and handles the processing and payment of dozens or hundreds of separate bills.[127] Indeed, the locations for a single MLB may span dozens of individual ILEC footprints. Competitive carriers such as Granite relieve MLBs from the burden of procuring services from each individual ILEC, and provide MLBs with a single consolidated bill.[128] Without competitors like Granite, each of these customers would almost certainly need to coordinate and negotiate with many ILEC vendors.[129] **[BEGIN HCI]**

. [END HCI]

For example, one large, pharmacy chain customer estimated that it would be required to **[BEGIN HCI]** **[END HCI]** the staff dedicated to the purchasing and coordination of telecommunications services, leading to cost increases of **[BEGIN HCI]** **[END HCI]** per year, and would also likely incur additional dispatch and no-issue found fees.[130]

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[125] *Id.* ¶¶ 5, 7.

[126] Zarakas Decl. ¶ 13.

[127] Antonellis Decl. ¶ 7.

[128] Zarakas Decl. ¶ 7.

[129] *Id.* ¶ 11.

[130] Antonellis Decl. ¶ 17.

These harmful effects would be felt by a broad range of customers across the country, including many customers with a substantial presence in in rural areas. For example, one of Granite's large retailer customers, which has stores located disproportionately in rural areas compared to other nationwide retailers, but low demand for only one to three low-bandwidth lines per location, uses traditional TDM to satisfy its needs.[131] If Granite were unable to serve this customer, it would have no choice but to purchase traditional TDM service directly from each ILEC at a quality-adjusted price that would significantly higher that price it pays today.

Granite's smaller business customers, which make up make up **[BEGIN HCI] [END HCI]** of Granite's customer base, would also be harmed.[132] Often, these small business customers choose Granite because they were unhappy with service previously provided by the ILEC, or because of Granite's expertise in advising on the customer's telecommunications needs.[133] Without the avoided-cost discount, it would no longer be profitable for Granite to service many of these small customers, who would be left with no choice but to purchase traditional TDM from the ILEC at prices unmoored by any competitive offering.[134]

h. Federal government customers are likely to be harmed by forbearance.

Federal government customers would be especially hard hit by the elimination of avoided-cost resale. Granite provides service to numerous federal agencies.[135] If competitors

[131] *Id.* ¶ 20.

[132] *Id.* ¶ 8.

[133] *Id.*

[134] *Id.*

[135] *Id.* ¶ 25.

like Granite are unable to provide one-stop-shop service to those customers, their costs will almost certainly rise and the quality of the service they receive will almost certainly deteriorate.

Assistant Secretary Redl recently described the vulnerable position of government agencies that must purchase traditional TDM service in his letter to Chairman Pai. Assistant Secretary Redl reiterated the budget, procurement, and other challenges that government customers face in connection with transitioning strategic government applications that use legacy services to alternative next-generation services.[136] He cautioned that discontinuance of copper networks could place federal departments and agencies in the untenable position of losing access to critical national security and public safety communications.[137]

i. The costs of retaining Section 251(c)(4) resale are *de minimis*.

As explained, Congress designed Section 251(c)(4) avoided-cost resale so as to impose virtually no costs on ILECs. That is because avoided-cost resale ensures that an ILEC makes all profits it would otherwise make when selling traditional TDM services at retail to its own customers. Accordingly, denying forbearance from Section 251(c)(4) would not adversely impact ILECs' investment in the construction of new networks or the provision of new services. Not surprisingly, USTelecom makes no attempt to assert that continued application of Section 251(c)(4) would have these effects.

3. *USTelecom Has Not Met, and Cannot Meet, the Statutory Standard for Forbearance.*

There can be no question that Section 251(c)(4) continues to be necessary to serve the function Congress intended when it adopted that provision. Section 251(c)(4) was designed by Congress to prevent the ILECs from abusing their market power in markets like traditional TDM

[136] *See* July 19 NTIA Letter at 2.

[137] *Id.* at 1.

service. Congress knew that the ILECs had a monopoly over legacy copper infrastructure, that it was unlikely that any other firm would be able to replicate that infrastructure, and that, absent price constraints, ILECs would have the incentive and ability to abuse their market power by increasing wholesale prices to drive competitors from the market. By establishing the avoided-cost resale requirement, Congress ensured that competitors would be able to enter the market and deliver innovative services that would otherwise be unavailable. It did so without imposing significant costs on ILECs. Congress judged that the substantial benefits of such regulation exceeded its *de minimis* cost, and that continues to be the case today.

USTelecom has not shown, and cannot show, that forbearance from enforcing Section 251(c)(4) meets any of the three prongs of the forbearance test. Section 251(c)(4) resale remains necessary to ensure that prices for traditional TDM-based services are just and reasonable, and not unjustly or unreasonably discriminatory as well as necessary to protect consumers. This is true not only for traditional TDM services sold pursuant to Section 251(c)(4) but also for such services provided pursuant to commercial wholesale agreements with the ILECs. As shown here, both wholesale and retail rates would increase if the Commission were to forbear from the Section 251(c)(4) avoided-cost resale requirements. Business and governmental customers would lose the benefit of "one-stop shop" value and efficiencies, effectively causing them to pay higher prices for telephone service.

Retention of Section 251(c)(4) is also in the public interest. As explained, the statute states that, when making the public interest determination, the Commission shall "consider whether forbearance from enforcing the provision or regulation will *promote* competitive market conditions, including the extent to which such forbearance will *enhance* competition among

providers of telecommunications services."[138] As demonstrated herein, Section 251(c)(4) promotes and enhances competition by enabling competitors like Granite to obtain key inputs at prices that enable to serve the needs of business and governmental customers. Absent avoided-cost resale, there would be less competition, in some cases no competition at all, in the provision of traditional TDM service. Indeed, it is striking that USTelecom has alleged no public interest benefits associated with forbearance from avoided-cost resale. That is because there are no such benefits. Forbearance from the avoided-cost resale requirement would do nothing to increase incentives to invest in the construction of new networks or the provision of new services, but retaining the requirement would have no adverse impact on such incentives.

III. CONCLUSION.

For the foregoing reasons, the Commission should promptly deny USTelecom's Petition insofar as it seeks relief from the Section 251(c)(4) avoided-cost resale requirement and the related provisions of Sections 251 and 252.

Respectfully submitted,

/s/ Thomas Jones

Thomas Jones
Mia Guizzetti Hayes
Samuel Eckland
WILLKIE FARR & GALLAGHER LLP
1875 K Street, NW
Washington, DC 20006
(202) 303-1000

Counsel for Granite Telecommunications, LLC

August 6, 2018

[138] 47 U.S.C. § 160(b) (emphasis added).

Attachment A:
Declaration of Larry Antonellis

DECLARATION OF LARRY G. ANTONELLIS

I, Larry G. Antonellis, being over 18 years of age, swear and affirm as follows:

1. I make this declaration based upon my personal knowledge, information and belief, and in support of the Opposition of Granite Telecommunications, LLC ("Granite") to the Petition of USTelecom – The Broadband Association ("USTelecom") for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks.[1]

2. I am currently Director of Strategic Initiatives for Granite. I joined Granite in 2005 as Premier National Account Manager and have held positions of increasing responsibility in Granite's national account management team. I earned a Bachelor's degree in Mathematics from the University of Massachusetts and have acquired substantial knowledge about pricing and competition in the telecommunications industry. My responsibilities at Granite include working with Granite's Premier Account Managers on client development and retention. I also oversee the implementation of pricing programs and projects that support Granite's long-term vision. During my employment with Granite, I have repeatedly been involved in negotiations with incumbent local exchange carriers ("ILECs") for the purchase of wholesale voice and data services and avoided-cost resale services, and I have developed an understanding of how ILECs price such services.

3. In this declaration, I will discuss the continuing importance of traditional voice services provided by ILECs generally, discuss the value that the provision of these and related services allow Granite to provide to its customers, detail the continuing importance of

[1] Petition of USTelecom for Forbearance Pursuant to 47 U.S. C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks, WC Docket No. 18-141 (filed May 4, 2018) (the "UST Petition").

avoided-cost resale specifically to Granite and its customers, and describe the harm to competition and Granite's customers that would come from elimination of the avoided-cost resale requirement.

I. The Value of Granite's Services and The Use of Avoided-Cost Resale

4. Companies like Granite provide telephone services to businesses that tend to have multiple locations across multiple ILEC territories and that demand reliable connectivity, but not large amounts of bandwidth, at each individual location. Such multi-location businesses ("MLBs") include retailers, restaurants, hospitality companies, real estate companies, health care providers, banks and financial service companies, public utilities, non-profit organizations, and governmental agencies. Granite's customers include more than 80 of the Fortune 100 companies. Granite also provides services to other businesses as well, like neighborhood shops with one or only a few locations that do not demand large bandwidth at each location.

5. In my experience, MLBs prefer competitive carriers like Granite because of the "one-stop shop" (including voice service, billing functionality, customer support, and technical assistance) these carriers provide. Granite has been successful in supplying retail voice services to MLBs and is among the most efficient competitive providers of such services in the United States, building on the economies of scale it has achieved through its business acumen and success. For example, Granite provides heightened customer support and technical assistance and creates efficiencies for its customers in multiple ways. Granite has distinguished itself from other retail voice providers by offering teams of dedicated account managers, 24/7/365 operation and tech support, consolidated and customizable bill reporting, and online tracking tools. Granite's personnel possess expertise catered to each customer's unique communications infrastructure and preferences, which lets Granite focus on resolving operational issues and frees the customer so it may shift internal resources away from managing

the dozens of underlying network suppliers to running its own business. These efficiencies are, in important part, a result of the ability of Granite to offer its MLB customers a one-stop shop.

6. Granite has also achieved success by catering to the specific needs of MLBs, which are different from a household or a small business. Granite provides seamless communications among and between the MLB's locations and between those locations and the MLB's customers. Considered individually, each MLB location does not require a large amount of telephone lines. But, in considering an MLB as a whole, the need for connectivity to reach many locations becomes substantial. Indeed, MLBs need several lines for each of their locations—often dozens within a state and hundreds or thousands nationwide. Granite specializes in, among other things, managing 1.38 million business lines that carry voice traffic to more than 400,000 business locations in 49 states.

7. **[BEGIN HCI] [END HCI]** of Granite's revenue comes from customers that are simultaneously operating locations within the service areas of **[BEGIN HCI] [END HCI]** different ILEC operating companies, which may include multiple state-level affiliates. Granite provides substantial assistance in managing the relationships between its customers and the ILECs. Granite coordinates with ILECs for the provision of telephone services to its customers using time division multiplexing ("TDM") technologies and handles the processing and payment of dozens or hundreds of separate bills. Granite also commits to the long-term pricing commitments required by MLBs and enters into long-term fixed contracts with them and with ILECs. The industry-standard contract for such businesses is three to five years. In contrast, smaller, single-location customers tend to prefer shorter commitments (e.g., annual contracts).

8. Granite's smaller business customers also value the TDM-based telephone and other services they purchase. While **[BEGIN HCI] [END HCI]** of Granite's revenues come from business customers with less than 10 locations, these small customers make up **[BEGIN HCI] [END HCI]** of Granite's customer base **[BEGIN HCI] [END HCI]**. Often, these small business customers choose Granite because they were unhappy with service previously provided by the ILEC, or because of Granite's expertise in advising on the customer's telecommunications needs. But without Section 251(c)(4)'s avoided-cost discount, it would no longer be profitable for Granite to services many of these small customers. Thus, such customers would be left with no choice but to purchase traditional TDM from the ILEC, losing the value Granite provides.

II. The Continuing Importance of ILEC-Provided TDM Voice Services, Including Avoided-Cost Resale, to Competitive Carriers and Their Customers

9. TDM and circuit switching technologies are used to provide reliable voice services over an effectively ubiquitous ILEC network. TDM-based telephone services are typically provided over physical copper wire infrastructure, particularly non-broadband DS0s, built by the ILECs predominantly when they operated as regulated monopolies (hereafter, "traditional TDM"). Although TDM-based telephone services can be provided over fiber, TDM-over-fiber services are distinguishable from traditional TDM services because they lack certain characteristics. For example, TDM-over-fiber is not self-powering. Because of this, TDM-over-fiber lines make up only a small percentage of the total TDM-based telephone lines Granite provides to its customers – **[BEGIN HCI]**

[END HCI].

10. Avoided-cost resale remains important to Granite customers that use traditional TDM. Avoided-cost resale is sometimes preferred over other forms of traditional

TDM because it is available with product features that are not available through commercial wholesale contracts. On occasion, customers require Centrex functionality, where equipment used to provide these services is located at the ILEC's central office and not at customers' business locations. **[BEGIN HCI]**

[END HCI]

Other Granite customers require private lines, such as a line directly connecting the customer's premises to a fire station. ILECs generally do not make such private lines available through commercial arrangement.

11. Granite's customers that are most reliant on avoid-cost resale come from a broad cross section of industries. Included in the top-5 customers with more than **[BEGIN HCI]** **[END HCI]** traditional TDM lines, by percentage of lines purchased through avoided-cost resale, are **[BEGIN HCI]**

[END HCI]. Each of these customers purchases its traditional TDM lines through avoided-cost resale between **[BEGIN HCI]** **[END HCI]**, significantly more than the average customer's reliance on avoided-cost resale **[BEGIN HCI]** **[END HCI]** of the time.

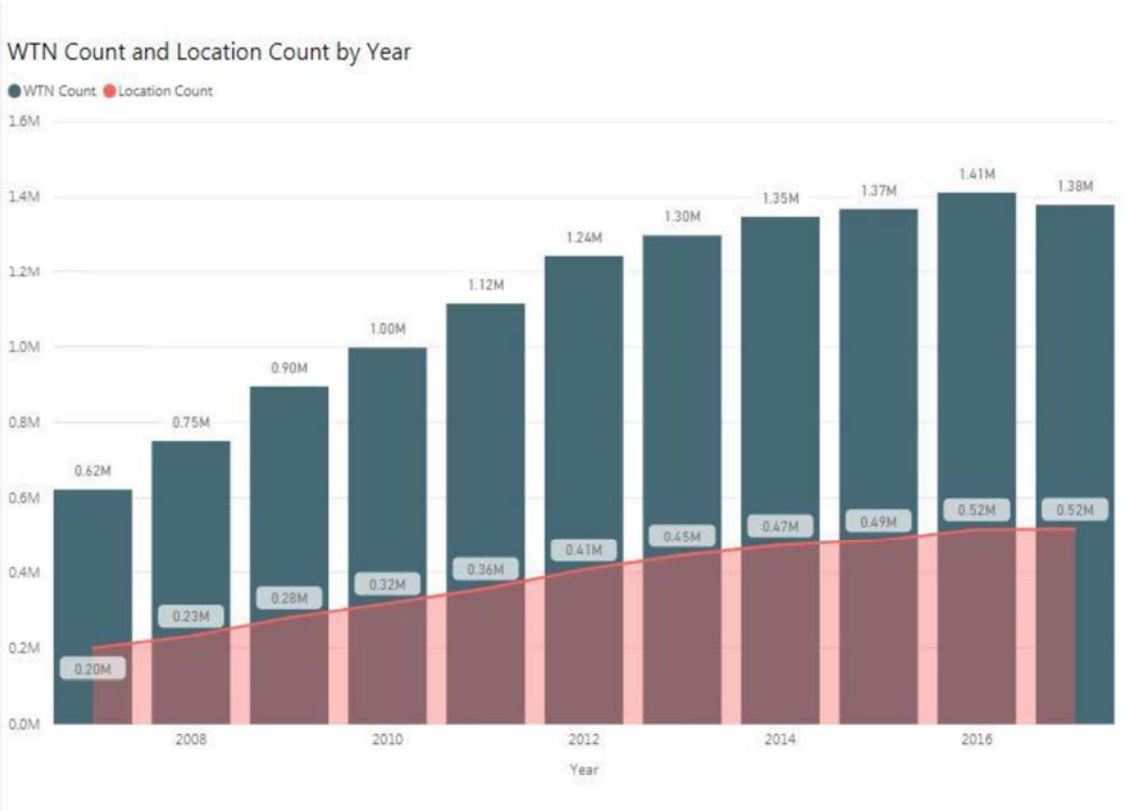
12. Although new forms of voice services have emerged, such as Voice-over-Internet Protocol ("VoIP"), which is transmitted over networks that use TCP/IP technology, traditional TDM continues to provide unique benefits that even managed VoIP services cannot. For example, "best effort" managed VoIP services offered by cable companies are less reliable and less secure than traditional TDM, and may be insufficient to comply with applicable regulatory requirements. While VoIP can in certain circumstances match the reliability and security of traditional TDM, doing so requires expensive dedicated access lines and self-

powering capabilities at the customer's location that are either not possible to obtain or are more expensive than the customer is willing to pay. Thus, customers who need reliable and secure access to critical infrastructure use traditional TDM, not VoIP.

13. Traditional TDM also provides numerous benefits over wireless services. As a threshold matter, fixed wireless services are not broadly deployed and thus are unavailable at most customer locations. These services also suffer from well-known limitations, including line-of-sight restrictions and limited range where they have been deployed. Second, fixed and mobile wireless services do not provide sufficient reliability to meet the needs of customers who rely on traditional TDM. Wireless signal "dead zones" are widespread, and wireless service may be overloaded and inoperable during emergencies or at unexpected peak times. Third, mobile wireless service also lacks functionalities, such as faxing and "rollover" lines for business use, required by customers. Some customers, like pharmacies, must maintain fax machines that use traditional TDM to ensure they receive doctor prescriptions. Others, including most MLBs, use traditional TDM to take customer calls and typically require for business use multiple lines that "rollover" from the prime line when it is in use, thus allowing the business to receive multiple, simultaneous calls directed to the same telephone number by hunting for another business line when the first line is being used.

14. TDM continues to be important to both Granite's MLB and small business customers. From Granite's perspective, the use of TDM-based telephone services is not in decline or going away. Rather, as the following chart of working telephone number ("WTN") counts and total locations demonstrates, the number of Granite customer locations receiving TDM-based telephone services has increased or remained steady every year since 2004, while the total number of TDM-based telephone lines has increased or remained steady every year

except 2016-2017; indeed, they are purchased by **[BEGIN HCI]** **[END HCI]** of Granite's customers.



A. Reliable Connections over Traditional TDM

15. Many customers that use traditional TDM depend on the fact that copper networks are self-powered and therefore continue to operate even in the event of power outages, without the need for additional fail-safes such as generators or batteries.

16. That includes business customers that rely on these traditional TDM services as a back-up means for critical communications, even when they also use IP-based services, including VoIP, at the same locations. National pharmacy chains, for example, have thousands of stores across the country. On a nearly daily basis, one or more of these locations suffer from outages to, or encounter some type of access issue with, the "best effort" IP access services they use. These pharmacies demand traditional TDM to ensure they can continuously

engage in critical business functions, including accessing servers storing customer information, operating point-of-sale equipment, communicating with hospitals and doctors, and filling prescriptions, even when their IP networks encounter service issues.

17. A large, pharmacy chain customer of Granite's derives such benefits from Granite's services. With over **[BEGIN HCI] [END HCI]** stores nationally, this customer reports that it suffers an average of **[BEGIN HCI] [END HCI]** outages to its "best effort" IP access services every day. It uses traditional TDM to access its local servers as a way to diagnose the impact of outages and to maintain some data connectivity with each location. This customer uses **[BEGIN HCI] [END HCI]** employees to purchase and coordinate the provision of telecommunications services at its retail stores, and relies heavily on Granite to manage its services, identify the business locations that suffer from the most significant and consistent service outages, and provide advice on locations that should receive service upgrades. It is my understanding that without Granite, this customer would be required to **[BEGIN HCI] [END HCI]** the staff dedicated to the purchasing and coordination of telecommunications services, leading to cost increases of **[BEGIN HCI] [END HCI]**, and would also likely incur dispatch and no-issue found fees, resulting in even additional costs.

18. The provision of reliable connectivity has special importance for those businesses that rely on TDM to ensure the operation of critical systems such as medical alerts, fire/sprinkler monitoring, gas pipeline monitoring, bank vault or burglar alarms, and elevators that require reliable back-up systems for unexpected failures, even where VoIP services provided over managed networks (i.e., not over the public Internet) are available. Property management companies, for example, require reliable fire/sprinkler, burglar, and elevator alarms across the

wide range of buildings they manage. These companies are unable to rely on managed VoIP and wireless services that are not self-powered and cannot function without electricity. Additionally, such companies are also sometimes required by state or municipal regulations to maintain plain-old telephone lines, or use such lines, rather than VoIP lines, for the transmittal of emergency calls.[2]

19. The services Granite provides to its bank customers are representative. Granite provides services to **[BEGIN HCI] [END HCI]** banks that have multiple locations across 49 states; every one purchases traditional TDM. They do so for many reasons. For example, the self-powering capabilities of traditional TDM ensure that bank vaults remain secure, and that critical banking operations such as such as clearinghouses, ATMs, and electronic transfer capabilities continue in the event of a power outage. Banks also use traditional TDM to meet security-related regulatory obligations.

B. Widespread and Rural Locations

20. In many rural areas, there is frequently no wireline voice service other than traditional TDM. Thus, even if there were some substitution between other voice applications and traditional TDM (which there is not for the reasons described above), in these regions there can be no question that traditional TDM is the only choice. For example, one of

[2] *See* Mich. Admin. Code R. 400.8164(1) (requiring child care centers to have operable landline telephone that does not require electricity to operate); N.Y Comp. Codes R. & Regs. tit. 14, § 635-7.3(c)(6) (requiring residential and non-residential facilities receiving funding or certification by the Office for People With Developmental Disabilities to have landline telephone service that can function during power outages, unless cellular telephone service is available at the location at all times)**;** 22 Va. Admin. Code § 40-111-330(A) (requiring all family day homes to have an operable landline telephone that does not require electricity to operate); Fire Code for Village of Libertyville, IL, Sec. 607.8.5, http://www.libertyville.com/DocumentCenter/View/123/fire_code ("All emergency telephone lines from the elevator to the Libertyville Dispatch Center shall be transmitted over POTS lines and not VOIP lines.").

Granite's large retailer customers, which has stores located disproportionately in rural areas compared to other nationwide retailers, uses traditional TDM to satisfy its typical need for only one to three low-bandwidth lines per location.

21. Additionally, one of Granite's mobile wireless retail service provider customers relies on TDM-based telephone services to test and monitor small, low-power cellular base stations (femtocells) and router equipment it deploys to hard-to-reach areas. As this provider has increased deployment of these femtocells and other equipment to rural areas as part of its rollout of 5G, this provider has correspondingly increased its use of TDM-based telephone service in those areas, even where it has dedicated resources to purchase higher-speed broadband access services in more urban areas where it previously relied on TDM-based telephone services. The deployment of 5G in the coming years is likely to lead to continued, increased use of TDM-based telephone service in rural areas for these purposes.

22. Government facilities are, of course, located in many, many locations, including in rural America. Even though the federal government, as a predominant buyer of communications services, is generally well-positioned to protect its interests, it has encountered particular difficulties in these rural areas. As explained in NTIA's recent letter to the FCC, federal agencies that operate in rural areas often receive services outside of their large-scale contracts with carriers, such as the General Service Administration (GSA)-negotiated contracts underlying the Networx and its replacement, Enterprise Infrastructure Solutions ("EIS").[3] In such contexts, these federal agencies and their contractors must negotiate with carriers that do not face adequate competitive pressures and lack incentives that exist in more populated areas,

[3] *See* Letter from David J. Redl, Assistant Secretary for Communications and Information, NTIA, to Ajit Pai, Chairman, FCC, at 2 (July 19, 2018) ("July 19 NTIA Letter").

and suffer from an inability to negotiate for contractual provisions that adequately serve federal users' needs.[4]

23. The experience of Granite's government customers is representative. For example, Granite supports a large public institution that operates **[BEGIN HCI]**

[END HCI] of TDM lines for voice communications and point-of-sale transactions at **[BEGIN HCI]** **[END HCI]** locations, but often requires just **[BEGIN HCI]** **[END HCI]** traditional TDM lines per location. Many of those locations are in rural locations, where limited alternatives to the ILEC's deployed network are available. Converting to a replacement IP technology would take a massive amount of effort and coordination and would be extremely expensive given the lack of alternative access providers and older technologies and infrastructure deployed at each current location. Switching from TDM to IP would not be economically justified at the majority of its locations.

24. These difficulties can lead to an increased reliance on avoid-cost resale. Indeed, government agencies are the large Granite customers that **[BEGIN HCI]**

[END HCI]. The aforementioned large public institution customer purchases **[BEGIN HCI]** **[END HCI]** traditional TDM lines using the avoided-cost discount of any Granite customer – **[BEGIN HCI]** **[END HCI]** lines – making up **[BEGIN HCI]** **[END HCI]** of the traditional TDM lines it procures through Granite. A different government customer purchases **[BEGIN HCI]**

[END HCI] – while the average Granite customer uses avoided-cost resale to meet **[BEGIN HCI]** **[END HCI]** of their traditional TDM requirements.

[4] *Id.*

C. Particularized Needs of Governmental Agencies

25. In addition to their broad geographic distribution, government agencies also have special needs that require the provision of traditional TDM. As NTIA has explained to the Commission, government customers face particular budgetary and procurement challenges associated with the transitioning of strategic government applications that use legacy services to alternative next-generation services.[5] For example, the transition from legacy, copper-based networks and services to IP-based networks and services could place federal departments and agencies in the untenable position of losing access to critical national security and public safety communications functionality.[6] NTIA urged the Commission to stand by its commitment to sanction any carrier conduct that impinges those critical functions.[7]

26. Among others, the Federal Aviation Administration ("FAA") extensively relies on such services to operate its flight monitoring system, the National Airspace System ("NAS"), and to ensure safe and efficient travel in the United States and over large portions of the world's oceans. As of 2013, the latest publicly available information with which I am aware, 92% of the telecommunications services acquired by the FAA's Telecommunications Infrastructure Program are TDM-based.[8] This is because the NAS's essential applications and services require reliability, availability, and compatibility that can currently only be achieved by traditional TDM. For example, because TDM circuits have a fixed number of channels and constant bandwidth per channel, they enable NAS applications to establish critical clock

[5] *Id.*

[6] *Id.* at 1.

[7] *Id.* at 4.

[8] Comments of Harris Corporation, GN Docket No. 12-353 at 6-7 (Jan. 28, 2013) ("Harris Technological Transitions Comments").

synchronization, and avoid harmful latency, which could not be achieved using managed VoIP services.[9] Traditional TDM can also meet the stringent availability and compatibility requirements for transmission between critical, often remote, FAA sites, which requirements cannot be achieved by wireless and IP-based services.[10] While the FAA has commenced a migration toward IP-based services, it will continue to require and rely upon traditional TDM to ensure air safety for the foreseeable future.[11]

27. For all of these reasons, overall demand for traditional TDM remains strong.

III. Granite's Ability to Provide TDM-Based Voice Services As Part of its Overall Service Offering Is Dependent on ILECs

28. Granite purchases wholesale voice services from ILECs, which it then incorporates into the downstream voice service that is sold at retail to MLBs and single-location business customers combined with other value-added services. Granite competes against these same ILECs from which it must purchase wholesale voice services.

29. Granite must purchase wholesale voice services from ILECs because no provider other than the ILEC in its home territory has the physical infrastructure in place to provide traditional TDM to and from every MLB's locations. The local retail market has high barriers to entry. MLB customers typically rely upon copper connections that already exist at their locations and for which they already have the necessary equipment. These businesses have demonstrated no desire to pay for Granite, or another competitive provider, to dig to them or to buy expensive equipment necessary to make traditional TDM, or indeed, any other low-

[9] *Id.* at 6.

[10] *Id.* at 2; Comments of Harris Corporation, GN Docket No. 13-5 at 5 (July 8, 2013).

[11] Harris Technological Transitions Comments at 8-9.

bandwidth voice offerings, available for each of their locations, which in the aggregate are likely to cost the business an amount exceeding the expected generated revenue.

30. Indeed, investment in facilities for low-bandwidth voice services over copper is not realistic for Granite or any other competitive LEC. Granite has lines in **[BEGIN HCI]**

. **[END HCI]** These customer locations also have few other tenants that would stand to benefit from construction of new infrastructure. Given the limited bandwidth demand of MLBs at each location, it is not economical to incur new construction costs to build out to each location. Generally, new build-outs by non-ILECs are only done over fiber facilities, not copper.

31. To date, these fiber build-outs have been limited. In 2016, Granite conducted, at the request of a retail customer that uses traditional TDM, an "on the ground" survey of the customer's **[BEGIN HCI]** **[END HCI]**, which mainly involved contacting cable companies with facilities in the geographic area of the customer's locations to determine the availability of cable-based internet options. Granite found that non-ILEC competitors, including cable companies, either had deployed or could deploy transmission to **[BEGIN HCI]** **[END HCI]** of the locations studied. That is, ILECs provided the only facilities-based connection to **[BEGIN HCI]** **[END HCI]** of these customer locations.

IV. The Continuing Importance of Avoided-Cost Resale to Granite and Its Customers

32. In addition to selling wholesale voice services that Granite and other companies use to provide traditional TDM to MLBs, ILECs directly compete with Granite and

similar companies in the sale of downstream retail voice services to MLBs that are dependent on obtaining these wholesale voice services. Thus, in my experience, ILECs have a direct economic incentive to charge companies like Granite high prices for the wholesale services needed to provide traditional TDM.

33. Granite obtains the wholesale voice services from ILECs that it uses to provide traditional TDM in the ILEC's territory in primarily two ways.

34. The first option is to purchase local voice service through commercial wholesale agreements with the ILECs. The prices contained in these agreements are not set directly by application of avoided-cost rate regulation, but the existence of the option of avoided-cost resale helps to limit the ability of any particular ILEC to demand higher rates under commercial wholesale agreements. Despite natural incentives of ILECs to raise the prices for wholesale services for competitors such as Granite, the continued availability of avoided-cost resale has effectively limited the demands of ILECs so that Granite is typically able to obtain rates under commercial wholesale agreements that are between **[BEGIN HCI] [END HCI]** percent discounts from retail rates offered, depending on the state, after accounting for regulatory surcharges such as the access recovery charge ("ARC") and end-user common line charge ("EUCL") that are charged by ILECs on retail sales, including resale sales.

35. Both competitive carriers and ILECs assign value to reaching agreement on the wholesale contract as an alternative to the use of avoided-cost resale, which are reflected in the ultimately negotiated rates. For example, ILECs value the administrative ease of contracting with the competitive carrier directly, rather than administering individual contracts with retail customers, and the value of mitigating the risk of non-payment (from many individual resale arrangements). Competitive carriers place value on the administrative ease associated

with contracts covering many lines, the benefits of locking in price certainty versus facing potential resale pricing variability, and the ability to sell to and support MLB customers whose locations span multiple ILEC footprints.

36. In my opinion, absent the avoided-cost resale requirement, wholesale prices charged by an ILEC would effectively reach the ILEC's retail price to its own customers. In my experience, the ILECs would negotiate to advantage their own retail operations, suggesting that the resale discount would simply disappear.

37. Granite's recent negotiations with **[BEGIN HCI] [END HCI]** demonstrate the practical relationship between commercial wholesale pricing and the prices set through the avoided-cost discounts for resale. **[BEGIN HCI]**

[END HCI]

38. Granite's experiences with attempting to resell the traditional services of rural ILECs that are exempt from the avoided-cost resale requirement pursuant to Section 251(f) of the Communications Act also support the conclusion that avoided-cost resale acts as a check on the prices that Granite and other competitive carriers pay for traditional TDM service. When Granite has attempted to resell services to customers located in the service territories of these rural ILECs, **[BEGIN HCI]**

[END HCI] For one large public institution customer, which has locations in many rural areas, Granite currently rebills for traditional TDM at **[BEGIN HCI]** **[END HCI]** locations serviced by **[BEGIN HCI]** **[END HCI]** different ILECs.

39. The second option is to purchase wholesale services from ILECs at avoided-cost resale rates as made available to Granite under state supervision. ILECs are required to provide such resale by Section 251(c)(4) of the Communications Act. Generally, ILECs voluntarily decide what kinds of retail plans to offer in a state; for example, a plan may set a price based on term commitments and number of lines. If an ILEC sells a retail service, then Granite has a right to purchase that retail service at a discounted rate that reflects the costs that the ILEC avoids because it does not have to service a retail customer. The terms and conditions governing avoided-cost resale are set forth in interconnection agreements that are subject to review and approval by state public utility commissions. That negotiation is made easier and more efficient because state regulatory commissions set the avoided-cost discount rate to be used by ILECs within their jurisdiction.

40. In particular business circumstances, avoided-cost resale provides advantages over the use of wholesale pricing. Indeed, as noted above, avoided-cost resale accounts for roughly **[BEGIN HCI] [END HCI]** of TDM voice lines provided by Granite. Sometimes, Granite is able to get a better rate for avoided-cost resale than it is able to obtain through a commercial wholesale agreement. For example, some large, independent and rural ILECs simply refuse to enter into commercial wholesale agreements. This means that avoided-cost resale is the only practicable and economically-efficient means by which Granite can obtain the wholesale voice services needed to provide traditional TDM from these ILECs.

V. Harm to Competition and Customers from Elimination of the Avoided-Cost Resale Requirement

41. The inevitable result of forbearance from Section 251(c)(4) will include **[BEGIN HCI] [END HCI]** for MLBs, which rely on traditional TDM in the day-to-day operation of their businesses, including for ordinary customer telephone calls, the operation of burglar alarms and fax machines, and a reliable means of accessing computerized systems and customers during electrical blackouts caused by bad weather. Small businesses, which make up the bulk of Granite's traditional TDM customers, would also be injured.

42. Of course, without the application of the avoided-cost methodology, the price of resale generally would go up.[12] Further, as discussed above, but for the avoided-cost resale protections provided by Section 251(c)(4), ILECs would raise the prices they charge Granite for services made available in commercial wholesale agreements. In such an event,

[BEGIN HCI]

[12] Declaration of William P. Zarakas ¶¶ 21, 28, appended as Attachment B to the Opposition of Granite to USTelecom's Forbearance Petition.

. **[END HCI]** In both cases, this is direct harm to competition.

43. Further, as noted, the expected harm is not limited to price. Customers sometimes request functionalities that are only available through the purchase of avoided-cost resale. For example, some Granite customers require Centrex functionality or private lines that ILECs generally do not make available through commercial arrangement.

44. MLBs will also bear the cost of losing the value and efficiency of Granite's overall product, such as the benefits of a one-stop shop for national retail voice services, which MLBs prefer because of its superior product characteristics. **[BEGIN HCI]**

[END HCI]

I declare under penalty of perjury that the foregoing is true and correct to the best of my current information, knowledge, and belief.

Executed on August 6, 2018.

Larry G. Antonellis
Director of Strategic Initiatives
Granite Telecommunications, LLC

Attachment B:
Declaration of William P. Zarakas

Before the

Federal Communications Commission
Washington, D.C. 20554

In the Matter of Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks	))))))	WC Docket No. 18-141

DECLARATION OF WILLIAM P. ZARAKAS

I. Introduction

1. My name is William P. Zarakas. I am a Principal with The Brattle Group, an economics consulting firm, where I work primarily on economic and regulatory matters concerning the communications and energy industries. I have been involved in the economic analysis of issues facing these industries for roughly 30 years. I have provided reports and/or testimony before the Federal Communications Commission (FCC), the Federal Energy Regulatory Commission (FERC), the Securities and Exchange Commission (SEC), the Copyright Royalty Judges (Library of Congress), the U.S. Congress, state regulatory agencies, arbitration panels, foreign governments, and courts of law. I have previously provided testimony to the FCC on a range of issues and proceedings, including the economics and feasibility of deploying broadband networks and competitive analysis with respect to the market for business service data (BDS), market share and churn analyses, cost models, foreclosure and bargaining models, and pole attachments matters. My CV is attached as **Attachment A**.

2. I understand that USTelecom, The Broadband Association has petitioned the Federal Communications Commission ("FCC") to forbear from applying the avoided-cost resale obligation included in Section 251 of the Communications Act ("Act"). Forbearance from Section 251 obligations would mean that competitive local

exchange carriers ("CLECs") would not have access to services (that they can resell) from incumbent local exchange carriers ("ILECs") at rates prescribed by state regulatory commissions following the pricing methodologies set forth by the FCC when it implemented the Act. USTelecom has based its petition on assertions that the telecommunications market in the U.S. should be considered to be competitive on an overall basis and, accordingly, ILECs should no longer be obligated to provide access to their networks at regulated rates.

3. I have been asked by Counsel for Granite Telecommunications LLC ("Granite") to assess whether (and, if so, in what form) consumers will be harmed if the FCC were to eliminate the avoided cost resale provisions of Section 251 of the Act. I reviewed various CLEC business models and utilized data concerning customers and operating costs provided to me by Granite to inform my analysis.

II. CLECs address customer segments frequently overlooked by ILECs.

4. CLECs often provide their customers with telecommunications services using the networks of incumbent local exchange carriers. In these circumstances, CLECs lease a fully functional telecommunications service, in contrast to leasing portions of the ILEC's network that are components or elements of a service.[1] To attract and engage customers, these CLECs typically also provide additional services that are valued by customers to the basic telecommunications service that they are leasing from the ILEC. The provision of additional services on top of the basic telecommunications service is a point of differentiation and a key part of marketing to customers. My declaration focuses on the lease of DS0 services (i.e., voice service, or voice equivalent service). CLECs can lease these services from ILECs through at least three types of arrangements with ILECs. First, they frequently, but not always, have the opportunity to negotiate a commercial wholesale arrangement with the ILEC. Second,

[1] CLECs "lease" telecommunications services from ILECs, which should not be confused with the leasing of unbundled network elements (UNEs) from an ILEC. CLECs lease a telecommunications service in its entirety, whereas in other circumstances a CLEC may lease portions (or elements) of a telecommunications service through UNE arrangements.

they may procure telecommunications on an avoided-cost resale rate basis which ILECs are required to offer CLECs under Section 251(c)(4) of the Communications Act, with specific rates set by state regulatory commissions. Third, as a last resort, they may also procure telecommunications services under retail service rates (i.e., the same price and conditions that ILECs offer such services to end-use customers). Leasing under commercial wholesale arrangements and avoided- cost resale rates are the only two financially viable options available to CLECs, as competitive carriers are competing with ILECs for customers.[2]

5. Under Section 251(c)(4) of the Communications Act, CLECs are entitled to procure certain ILEC telecommunications services at a percentage discount off of the ILEC's retail rates,[3] with the degree of discount based on an avoided-cost methodology implemented at the state level and approved by state regulatory commissions. The percentage discounts that apply to each ILEC vary by state and by ILEC, and are summarized in Table 1 below. As shown in Table 1, this discount ranges from about 5% (in the case of Windstream) to 26%. The discount rate established by state regulators for AT&T and Verizon range from about 12% to roughly 25%. The discount on AT&T retail rates, on average across its service areas, is about 18.3%. Applying a simple numerical example, an average retail rate of $34, such a discount would correspond to significant savings to the CLEC of approximately $6.22 per line per month.

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[2] Leasing at retail rates means that the competitive carrier would need to either charge more than the ILEC or they would lose money on each sale. As a matter of law, Section 251(b)(1) also provides non-discriminatory access to such services; as a practical matter, this option appears to have no present commercial significance.

[3] Specifically, the Act requires ILECs to "offer for resale at wholesale rates any telecommunications service that the carrier provides at retail to subscribers who are not telecommunications carriers."

Table 1: Current Discount Rates on Retail Rates for Lines Under Section 251(c)(4) Resale Obligations

ILEC Vendor	States	Range of Discounts
ATT Ameritech	IL, MI, OH, IN, WI	16.62% - 21.46%
ATT Pac Bell	CA, NV	17.00% - 18.05%
ATT SW Bell	TX, MO, KS, OK, AR	14.50% - 21.60%
Bell South	FL, GA, LA, NC, TN, MS, SC, AL, KY	14.80% - 20.72%
Century Tel	MO, AL, WI, OH, AR, TX, WA, LA, CO, IN, IL, OR, MT, MS, TN, GA, MN, MI, ID, WY, NM	10.88% - 22.35%
CenturyLink	FL, NV, NC, OH, PA, VA, TX, IN, MO, MN, TN, KS, NJ, OR, SC, WA, MI, NE, WY, WI, NC, TX, VA	9.78% - 21.00%
Cincinnati Bell	OH	11.92%
FairPoint	NH, ME, VT	18.78% - 26.01%
Frontier	CT	25.50%
Frontier East	WV	15.05%
Frontier ITOC	NY, WV, MN, CA, TN, AZ, NV, NE, IL, GA, AL, ID, WI, FL, IA, NM, UT	10.00% - 12.18%
Frontier West	IL, WA, MI, OH, IN, WI, OR, NC, ID, SC, NV, AZ, CA	10.10% - 19.97%
Hawaiian Telcom	HI	15.00%
Qwest	AZ, CO, WA, MN, NE, IA NM, OR, UT, ID, ND, WY, SD, MT	12.20% - 19.37%
Verizon North	NY, MA, RI, CT	14.26% - 24.99%
Verizon South	VA, MD, PA, NJ, DC, DE	12.72% - 23.43%
Verizon West	CA, TX, FL	12.00% - 22.99%
Windstream	GA, KY, OH, NC, TX, OK, PA, NE, SC, NM, FL, NY, AL, AR, MO, MS, IA, IN, KS	5.00% - 15.00%

Notes and sources: Avoided cost discount for each state, compiled by Granite and reviewed by The Brattle Group.

6. These CLECs that market resold services tend to be "service heavy" and focus their market efforts and value propositions on specific segments of customers. Granite is a prominent CLEC whose services include providing copper-based TDM (i.e., voice) telecommunications services to businesses that operate in multiple locations. A single multi-location business (MLB) customer may operate in thousands of locations across the U.S. It is not surprising that these customers have a unique set of demands and service requirements.

7. First, the nature of operating a multi-locational business comes with its own set of logistical and coordination issues, which has led MLBs to place significant value on "one stop shopping" and consolidated customer-vendor processing and bill paying. Specifically, MLB customers tend to centrally coordinate procurement of many of their essential services, including but not limited to telecommunications services. The locations for a single MLB may span dozens of individual ILEC footprints. (As was shown in Table 1, multi-state ILECs, such as Verizon and AT&T, operate through a variety of legacy telephone companies.) CLECs, such as Granite, relieve MLBs from the burden of procuring services from each individual ILEC, and provide MLBs with a single consolidated bill.

8. Second, many of these MLBs prefer and/or require copper-based TDM-based lines ("TDM"). Accordingly, some CLECs, notably Granite, have lines of business that include procuring TDM-based lines for MLB customers. TDM-based services use a different technology than packet-based services (such as VoIP), and is unique in filling customer telecommunications requirements associated with, for example, alarms and monitoring. In his declaration, Larry G. Antonellis, Granite's Director of Strategic Initiatives, more fully explains how TDM-based lines meet these needs while VoIP cannot.[4] For example, TDM-based lines provided over copper networks can continue to operate when electricity service is interrupted because, unlike fiber-based networks, copper networks are self-powered and do not require additional fail-safes such as backup generators or batteries.[5] Also, TDM-based service is required (by local regulators and/or insurers) in connection with alarm and monitoring systems (e.g., fire alarms and sprinkler monitoring, bank vault or burglar alarms, elevator monitors and alarms, and gas pipeline monitoring).[6]

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4 Declaration of Larry G. Antonellis, appended as Attachment A to the Opposition of Granite to USTelecom's Forbearance Petition ("Antonellis Decl.").

5 *Id.* ¶¶ 9, 12, 15-17.

6 *Id.* ¶¶ 18-19.

III. ILECs have not met and/or are unable to meet the needs and requirements of the MLB customer segment.

9. Table 2 shows that most of Granite's customers receive copper-based TDM service across multiple locations, with **[BEGIN HCI] [END HCI]** customers each receiving service across more than 1,000 different locations, accounting for **[BEGIN HCI] [END HCI]** of Granite's acquired lines and **[BEGIN HCI] [END HCI]** of Granite's total monthly recurring revenue. Approximately **[BEGIN HCI] [END HCI]** of Granite's lines come from customers requiring copper-based TDM service at 10 or more locations; such customers also account for about **[BEGIN HCI] [END HCI]** of Granite's monthly recurring revenues.

Table 2: Customer Locations, Lines and Revenues (2018)

[BEGIN HCI]

[END HCI]

Notes and sources: Granite customer data. Analysis by The Brattle Group.
Granite line counts numbers in this table are slightly different from the line counts shown in the Declaration of Larry G. Antonellis. Granite has explained that this difference is due to differences in time, line inventory and revenue reporting.

10. A summary of the number of lines and number of locations served for Granite's top 10 customers is shown in Table 3. (Each row in the table is a single specific Granite

customer. An industry affiliation was used instead of actual customer names in order to protect customer privacy.)

Table 3: Granite's Top 10 Customers (by number of lines)

[BEGIN HCI]

[END HCI]

Notes and sources: Granite customer data. Analysis by The Brattle Group.

11. The table shows that Granite procures more than **[BEGIN HCI]** **[END HCI]** for each of these customers. The table also shows that each location on average has only a few lines in each of thousands of separate locations. Of significant importance, the table also shows that each of these customers would almost certainly need to coordinate and negotiate with many ILEC vendors. Granite's largest customers (in terms of their number of lines) would need to deal with 10 or so different telephone companies in order to procure service, and, for each of these, would need to review and pay separate telephone bills each month. This could turn into processing hundreds of bills each month, given that individual state and/or regional ILECs may bill separately for each product or service.

12. Granite provides copper-based TDM service to nearly 12,000 business customers that operate out of nearly 400,000 locations and use approximately 1.3 million lines. Table 4 shows the range and frequency of operating companies with which Granite must coordinate in order to meet its customer's special needs. This provides a reasonable minimum estimate of the number of operating companies its underlying customers would have to deal with if Granite were not there to intermediate for them. Granite must coordinate with six or more ILEC vendors for the customers that account for **[BEGIN HCI]** **[END HCI]** of its procured lines and **[BEGIN HCI]** **[END HCI]** of its monthly recurring revenues.

Table 4: Customers, Lines, Monthly Revenue and ILEC Vendors (2018)

[BEGIN HCI]

[END HCI]

Notes and sources: Granite customer data. Analysis by The Brattle Group.
Granite line counts numbers in this table are slightly different from the line counts shown in the Declaration of Larry G. Antonellis. Granite has explained that this difference is due to differences in time, line inventory and revenue reporting.

13. Because ILECs generally do not overbuild into each other's historical geographic footprint, they are unable to provide the one-stop shopping that is demanded by these MLB customers using their own facilities. In order for an ILEC to meet a large MLB customer's needs, it would have to engage in leasing lines from other ILECs.

IV. There is virtually no choice for traditional TDM services, and even limited choice for other landline services that are in a different product market.

14. In its petition for forbearance, USTelecom has taken a very broad view concerning the degree of competition present in the telecommunications market. However, such a broad and sweeping market analysis hides important product distinctions and geographic unevenness, and can give rise to inappropriate policy conclusions that risk substantial harm to the these locations. First, as explained above, MLBs are specifically seeking copper-based TDM service. Second, facilities-based provision of copper-based TDM services is only available from the ILECs, the underlying cost reasons for this being explained further below. And third, even if one were to include non-copper-based TDM services, such as VOIP, as an alternative for some subset of MLB lines, for a significant fraction of MLB locations no such alternatives exist.

A. It is uneconomic for CLECs to build out copper-based TDM service to individual MLB locations

15. Even a review of facilities-based options at the census block level does not fully reflect the options that are actually available to customers who have minimal telecommunications needs. Copper-based TDM services, especially for DS0 lines, are generally low revenue services and do not support the economics necessary to justify the build-out of a full network to meet the demand of most customers. When the possibility for scale economies are unavailable, telecom providers are much more likely to build-out facilities to customers that have much higher bandwidth demands and commensurately higher monthly telecom spending. Scale economies are absent for new facilities-based providers when trying to reach business customers who purchase only a few lines per location, as is typically the case for businesses that use copper-based TDM service.

16. As indicated earlier, many of Granite's customers subscribe to hundreds or thousands of business lines overall. However, they use only three or four lines per location, on average. Table 5 shows Granite's customers in terms of lines per location. As indicated in the table, most locations have very few lines: **[BEGIN HCI]**

[END HCI] – ensuring that building out facilities to these locations is financially infeasible. This is even the case for very large customers who procure telecom services for thousands of their locations, as shown in Table 3.

Table 5: Number of Lines per Location

[BEGIN HCI]

[END HCI]

Notes and sources: Granite customer data. Analysis by The Brattle Group.

17. Also, and importantly, when competitive facilities are in place, they frequently cannot provide TDM services. For a variety of well-understood reasons, any new build-outs tend to be over fiber-based facilities. There are no prospects for new entrants building out facilities over which self-powered TDM services could be deployed. ILECs are, and are sure to remain, the only providers of these TDM based facilities.

B. Alternatives to copper-based TDM service are unavailable for a large fraction of MLB locations

18. In practice, there are few facilities-based providers other than the ILEC available to a high percentage of Granite's customers. Granite has represented that it conducted a survey of **[BEGIN HCI]** **[END HCI]** on behalf of a

national retailer to which Granite provides copper-based TDM service.[7] Granite's customer had requested that Granite explore the customer's options to expand its telecom services, mainly concerning cable-based internet options. Granite conducted an "on the ground" survey; that is, they contacted providers, mainly cable companies that had facilities in the geographic area. However, when requested, arrangements could only be made for **[BEGIN HCI] [END HCI]** of the locations reviewed.[8] The results of Granite's detailed survey are not surprising. Data concerning facilities-based broadband options are available at the census block level in the FCC's Form 477 data set.[9] However, it is widely recognized that there may be significant variance concerning facility availability within a given census block. That is, census block level statistics likely overstate the extent of actual competition at particular locations because a supplier that serves any portion of a census block, no matter how small its actual service territory, is effectively counted as serving the entire census block.

19. As shown with Granite's survey data, many – **[BEGIN HCI] [END HCI]** – of Granite's MLB customers reside in locations where there are no landline facilities other than those of the ILEC. Unlike the case for higher telecom demand customers, telecommunications carriers do not find it economically feasible to extend their existing facilities to meet low demand customers.

V. The resale obligation – based on avoided costs – is designed to not financially burden ILECs.

20. Resale price discounts under Section 251(c)(4) are based on an avoided cost methodology, which ensures that, in addition to other costs, a return on invested capital is included in the resale price. The wholesale discount is intended to reflect the costs of certain retailing activities, including marketing, billing, collection, and other costs, that the ILEC can avoid incurring when leasing its lines to CLECs like Granite.

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7 Antonellis Decl. ¶ 31.
8 *Id.*
9 Fixed Broadband Deployment Data from FCC Form 477.

State commissions are charged with determining the appropriate "wholesale discount,"[10] which, as shown in Table 1 above, varies across states and is on average about 15.5%.[11] The ILECs therefore do not suffer a below market return on their investments when a business line is leased to a CLEC (via resale obligations) instead of sold directly to an end-user. There is, therefore, no adverse impact on their ability to gain profits or to invest in the construction of new networks or the provision of new services.

VI. Forbearing from enforcement of Section 251(c)(4) will have a detrimental effect on consumers.

21. The prices for copper-based TDM service will increase if Section 251(c)(4) resale rate obligations are eliminated, which will lead to **[BEGIN HCI]**

[END HCI].

22. Most of the leasing arrangements that Granite has with ILECs are through commercial wholesale agreements. USTelecom has stated that elimination of resale rate obligations will therefore have no effect on CLECs or their consumers. However, USTelecom ignored the impact that the presence of the avoided-cost resale rate option has on the price negotiation outcomes of commercial wholesale agreements. As a matter of basic economics, a negotiated agreement is the outcome of a bargain where the two parties share the "gains from trade," which is defined as the combined "net benefit" for both, or the difference between the "gross benefit" of agreement minus the value of the next best alternatives to the agreement.[12]

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[10] Section 252(d)(3) instructs a state commission to "determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier."

[11] Based on the simple average of values reported in Table 1.

[12] This can be modeled as a bargaining game. Consider a bargaining model for a highly simplified description of MLB procurement. Suppose Granite sells a line to an MLB at $40 and faces a resale procurement cost option of $28. For a negotiated wholesale price of W, Granite's net gain from the contract is $40 - W - ($40 - $28) = $28 - W. For the ILEC counterparty, suppose that if it reaches agreement it earns W minus a per-line effective cost of $20, but if it fails to reach agreement it earns the

Continued on next page

23. For example, in the case of a wholesale purchase agreement for business lines between Granite and an ILEC, the gross benefit to Granite is the profit it earns by reselling the lines to its customers less the agreement's wholesale acquisition fees paid by Granite to the ILEC. Granite must compare this "gross benefit" to its next best alternative. Under Section 251(c)(4), this alternative is the revenue it earns on resold lines minus an acquisition cost equal to the ILEC's relevant retail rate, adjusted for the regulated discount. The ILEC must also compare the benefit of the bargain to its outside option. Bargaining theory instructs that the parties will share the combined net surplus, with the specific proportions reflecting the relative bargaining skills and advantages of each party.[13]

A real-world example of bargaining theory in practice can be seen in **[BEGIN HCI]**

Continued from previous page

resale fee of $28 minus a per-line effective cost of $22 (this differential ensures that there are gains from trade, and may reflect lower costs for the ILEC when it has more assurance of greater lines sold under a contract). This implies that the ILEC's net gain from the contract is W – $26. If both parties are equally effective negotiators, they will equally split the potential gains from trade of $28-$26 = $2, for a negotiated wholesale price of W = $27.

13 *See* Binmore, Ken, Ariel Rubinstein, and Asher Wolinsky. "The Nash bargaining solution in economic modelling." *The RAND Journal of Economics* (1986): 176-188.

14 **[BEGIN HCI]**

. **[END HCI]**

15 **[BEGIN HCI]**

. **[END HCI]**

25.

[16] **[BEGIN HCI]** . **[END HCI]** Antonellis Decl. ¶ 34.

[17] **[BEGIN HCI]** . **[END HCI]**

[END HCI]

26. This close correspondence between commercial wholesale prices and avoided cost resale rates follows directly from basic bargaining theory. It also follows that an increase in the rates available to Granite under Section 251(c)(4) would result in an increase in the prices that Granite would have to pay under commercial wholesale arrangements.[21]

27. Mr. Antonellis provides an industry insider's assessment of how the resale option moderates wholesale prices. He explains that Granite's costs for lines procured under commercial wholesale agreements with ILECs would increase by as much as the entire resale discount (15.5% on average across each of the ILEC vendors and states shown in Table 1) if Section 251(c)(4) obligations were eliminated.[22] If this occurs, Granite's monthly cost per line across all of its commercial wholesale agreements (that is, with **[BEGIN HCI]** **[END HCI]** as well as with other ILECs) would increase from **[BEGIN HCI]**

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18 Antonellis Decl. ¶ 35.

19 *Id.*

20 *Id.*

21 Continuing the example from Footnote 8, if the resale alternative increases to $36 (from $28), then Granite's net gain from the contract becomes $36 - W and the ILEC's net gain becomes W - $34, for a predicted negotiated wholesale price of W = $35. Although no production costs have changed, because the rules have changed (the resale procurement cost increases, also implying an increase in the ILEC's opportunity cost), the negotiated wholesale contract price increases. In this example, Granite's profits fall and the ILEC's profits increase as a result of the increase in the resale procurement cost.

22 Antonellis Decl. ¶ 36.

. **[END HCI]**[23]

These commercial wholesale price increases would be profitable to the ILECs insofar as the ILECs stand to benefit from **[BEGIN HCI]**

. **[END HCI]**[24]

28. Granite would thus incur **[BEGIN HCI]**

.[25] **[END HCI]**

29. Such line procurement cost increases for CLECs like Granite would lead to two expected effects. **[BEGIN HCI]**

. **[END HCI]**

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[23] Granite's commercial wholesale agreements typically span several years, so the elimination of avoided cost resale obligations under Section 251(c)(4) would not necessarily affect the price it pays for DS0s immediately, but would come into play when negotiating for renewal of the expiring commercial wholesale contracts.

[24] Moresi and Salop (2013) demonstrate that a vertically integrated (wholesale plus retail) firm will, all else equal, charge higher wholesale prices than an unintegrated supplier, the higher is the value of sales diversion from retail rivals. *See* Moresi, S., & Salop, S. C. (2013). "vGUPPI: Scoring unilateral pricing incentives in vertical mergers." *Antitrust Law Journal*, 79(1), 185-214.

[25] **[BEGIN HCI]**

. **[END HCI]**

I declare under penalty of perjury that the foregoing is true and correct to the best of my current information, knowledge, and belief.

Executed on August 6, 2018.

William P. Zarakas
Principal
The Brattle Group

WILLIAM P. ZARAKAS
Principal

Boston, MA | +1.617.864.7900 | Bill.Zarakas@brattle.com

William P. Zarakas is a Principal with The Brattle Group, an economics consulting firm, and an expert on economic, strategic and regulatory matters involving the energy, telecommunications and media industries. His main area of work and research involves the economics of infrastructure deployment and network development, market and competitive analysis and the alignment of regulatory frameworks with policy goals and business models. Mr. Zarakas has also led the Brattle team in analyzing the competitive and economic impacts of recent telecom and media mergers, has conducted valuations of telecom businesses and spectrum, and estimated royalties and retransmission fees in the cable and satellite television industries. He also heads Brattle's retail energy practice, which covers Brattle's work in aligning evolving utility business, and regulatory frameworks and performance based regulation.

Mr. Zarakas has provided testimony and expert reports before the Federal Communications Commission, the Federal Energy Regulatory Commission, the Securities and Exchange Commission, the Copyright Royalty Judges (Library of Congress), the U.S. Congress, state regulatory agencies, arbitration panels, foreign governments and courts of law. He has led (and authored reports concerning) special investigations on behalf of corporate boards of directors and audits of management practices and operational and financial performance on behalf of regulatory commissions. He holds an M.A. in economics from New York University and a B.A., also in economics, from the State University of New York.

Broadband Modeling and Business Planning

- Developed and authored report concerning the costs of deploying wireless broadband in rural areas. Before The Federal Communications Commission In The Matter Of Connect America Fund and Universal Service Reform – Mobility Fund. WC Docket No. 10-90 and WT Docket No. 10-208A. (February 2013, and updated analysis May 2016).
- Directed comprehensive financial analysis for a U.S .national broadband provider including: developing projections of demand, price elasticities, revenue and capital and operating costs, and pricing points.
- Performed comprehensive business case analysis of entry into the broadband market (including voice, internet access and video services) on behalf of a major U.S. electric utility. Scope of work included technology assessment and detailed financial modeling. Work included customer and geographic segmentation, pricing scenarios and elasticity analysis.
- Led comprehensive financial analysis concerning the deployment of a broadband communications network for an Asian electric utility. Related work included assessing transfer pricing methodologies regarding the use of utility assets, resources and easements by the broadband affiliate.

- Directed and led analysis of business diversification for multiple electric utilities. Business opportunities analyzed included dark fiber construction and third party use of utility poles, towers and conduit. Scope of analysis included financial modeling and transfer pricing.

Competition Analysis

- Directed comprehensive analysis and provided testimony concerning market shares, vertical foreclosure and Nash bargaining in the Application of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Comcast to Assign or Transfer Control of Licenses, Before the Federal Communications Commission, MB Docket No. 10-56. (December 2014 and March 2015).
- Led analysis and provided testimony concerning the merger of TECO Energy, New Mexico Gas Company, and Continental Energy Systems, Before the Public Regulation Commission Utility Case No. 13-00231-UT (March 2014).
- Directed analysis and authored report regarding the effects of changes in regulatory fees and taxes on mobile prices, penetration and the macro economies of 22 countries in the Middle East and Africa. Study, conducted on behalf of a major mobile operator, involved detailed analysis of the relationships between marginal cost and prices, market structure and concentration, and empirical relationships concerning mobile penetration and GDP.
- Led analysis and authored expert reports concerning prospective merger savings and divestiture losses for electric and gas utilities. Scope of work included analyses involved in determining the operating and capital impacts of mergers under multiple scenarios, and also involved the anticipated economic inefficiencies resulting from forced divestiture. Reports authored included studies of merger efficiencies and reports concerning Economic Loss Studies included in U-1 filings before the U.S. Securities and Exchange Commission. Economic Loss Studies are required under PUHCA Section 11 (b) (1) Clauses A, B, and C when utility merger results in the establishment of a registered holding company with electric and gas businesses. Work in these areas included detailed analyses of current and hypothetical future electric and gas utility operations.

Spectrum Valuations

- Conducted analyses and authored expert report estimating value of Mobile Satellite Service (MSS) spectrum (i.e., the 2 GHz Band from 2000-2020 MHz and 2180-2200 MHz, the Big LEO from 1610-1626.5 MHz and 2483.5-2500 MHz, and the L-band from 1525-1559 MHz and 1626.5-1660.5 MHz) in several matters, including matters involving the Terrestar

bankruptcy. Analyses included impact of incorporating FCC authorized ancillary terrestrial component (ATC) into MSS mobile broadband networks.

- Analyzed spectrum values in the 2.3 and 2.5 GHz bands for the U.S. market.
- Analyzed value of Advanced Wireless Services (AWS; 1.7 / 2.1 GHz) band for the U.S. market.
- Analyzed value of unpaired 2.1 GHz spectrum for the U.S. market.
- Analyzed value of 2.3 GHz (WCS) 3.5 GHz (FWA) spectrum in Canadian market.
- Authored report concerning market comparable analysis of U.S. PCS market.
- Provided expert testimony concerning potential value of wireless spectrum in the 700 MHz band.
- Analyzed value of Specialized Mobile Radio (SMR) and Private Land Mobile Radio Services (PLMRS) spectrum on behalf of utility operating companies in the U.S. market.
- Analyzed value of narrowband PCS and IVDS spectrum portfolio.
- Directed, led analysis and authored report concerning valuations of wireless spectrum in the Middle East-North African (MENA) region for an international wireless operator.
- Directed, led analysis and authored report concerning impact of additional wireless operators on spectrum values for the telecommunications regulator in the Kingdom of Jordan.

Utility Business Models and Investment Analysis

- Advised New York's Reforming the Energy Vision (REV) architects (i.e., the NYPSC chair and NYSERDA leads) on implementation and utility transformation issues. Led comprehensive modeling and scenario analysis concerning the impact of distributed energy resources (DERs) on utility sales, revenues, capital and operating cost structures and financing, and on utility rate base and customer rates and bills. Project also involved developing scenarios for energy and related service based transactions occurring over a utility platform and the most appropriate scope of a platform in the near term.
- Modeled and advised New York's six investor owned utilities on matters relating to regulatory incentive structures. The New York REV created earnings adjustment mechanisms (EAMs) intended to provide a bridge from the traditional regulatory model to a (still evolving) next generation model. The State's utilities are responsible for specifying the new EAMs. Brattle worked with the utilities to design EAMs and also conducted scenario

analysis that projected likely outcomes in key REV areas (e.g., peak reduction, asset utilization and integration of DERs).

- Led strategic analysis of next generation (i.e., utility of the future) regulatory frameworks for a Midwestern electric utility. Specifically, Brattle was asked to opine on the future of utility platforms (highly transactive two-sided markets vs. less transactive / more informational) recommend the appropriate regulatory framework for the near to intermediate term. Brattle's analysis included a review of DER feasibilities and transactive platform requirements. It also included a comprehensive assessment of regulatory incentive frameworks, including performance based regulation and the U.K.'s RIIO model.
- Led system reliability and resilience investment analysis for a large combination electric and gas utility. Customer concern (and political pressure) following a series of weather-induced large scale and long duration outages led to the utility developing an extensive and relatively expensive resilience investment program. Brattle advised the company on benefits and costs, and employed a value of lost load (VOLL) methodology to estimate customer willingness to pay for higher reliability in extreme circumstances. The company modified the scope of its investment program accordingly. Brattle analysis and reports were also included in the company's regulatory filings. (Public Service Electric & Gas (PSE&G) in NJ BPU Docket No. EO13020155 and GO13020156)
- Advised board of trustees and executive management on strategic and organizational direction for the Long Island Power Authority (LIPA). LIPA assumed a municipal corporate structure following the decommissioning of a nuclear power plant. The utility had among the highest rates in the U.S. and the lowest customer approval ratings. Brattle was retained to advise the utility and the Governor's office on ways to improve cost structure (e.g., through privatization, municipalization and outsourced management services arrangements) and ways to better understand and meet customer needs (e.g., community energy programs and resilience improvements). Options were evaluated based on rate impacts and risk factors, including risks associated with organizational transformation. Project required extensive modeling of LIPA operations and financing scenarios, as well as analysis of power and transmission markets.
- Advised board of directors of a major generation and transmission (G&T) cooperative and its member electric distribution cooperatives on matters concerning: asset valuations, risk management strategy, merger and acquisition options, and outlook for retail electric markets.

Cost, Rate and Incentive Analyses

- Led analysis and authored report and testimony concerning the specifications, targets and incentive structure for performance regulatory measures for use by the Hawaiian Electric Companies. Before the Public Utilities Commission of the State of Hawaii, In The Matter of Public Utilities Commission Instituting an Investigation to Reexamine the Existing Decoupling Mechanisms Docket No. 2013-104. September 15, 2014
- Led analysis and authored report and testimony concerning incentive regulatory frameworks and targeted performance incentives for electric and natural gas utilities in Massachusetts. Massachusetts D.P.U. 12-120. March 2013.
- Led and authored report concerning comprehensive analysis of approaches to setting electric distribution reliability standards on behalf of the Australian Energy Market Commission (AEMC).
- Directed and provided expert testimony on price cap frameworks and productivity analysis applied to telecommunications business data services (BDS, previously referred to as special access) in proceedings before the U.S. Federal Communications Commission. WC Docket No. 16-143, WC Docket No. 15-247, WC Docket No. 05-25, RM-10593.
- Directed and provided testimony concerning pole Attachment rates in Virginia Cable Telecommunications Association v. Virginia Electric and Power (December 21, 2001) and FCC Docket No. 15-90, File No. EB-15-MD-006 (November 18, 2015).
- Analyzed costs and value of retransmitted television programming in cable and satellite video markets and determined distribution of copyright royalty fees among content providers. Authored expert report Before The Copyright Royalty Judges, Library of Congress, Washington D.C. In The Matter of Distribution of the 2004 and 2005 Cable Royalty Funds, Docket No. 2007-3 CRB CD 2004-20. June 1, 2009
- Directed comprehensive modeling and analysis and provided testimony in multiple U.S. state regulatory proceedings concerning analysis of rates for unbundled network elements (UNEs), undertaken in fulfillment of requirements associated with the Telecommunications Act of 1996, using the Total Element Long Run Incremental Cost (TELRIC) methodology.
- Led analysis and provided testimony concerning incentive systems to be applied to incumbent local exchange telephone carriers (ILECs) on behalf of the New York State Department of Public Service; involved modeling determining total factor productivity (TFP)

based on empirical analysis and consideration of projected performance improvement initiatives.

- Conducted cost-of-service and marginal cost analyses for an international broadband company spanning the U.S., European and Asian markets.
- Directed cost of service and feasibility analysis for a municipality planning on deploying a broadband Wi-Fi network.
- Directed analysis and authored white paper on empirical analysis concerning the impact of changing the price of wholesale access and levels of investment in the U.S. telecommunications market. Results reported in white paper entitled: "Structural Simulation of Facility Sharing: Unbundling Policies and Investment Strategy in Local Exchange Markets."

Arbitration, Special Investigations and Commercial Litigation

- International Arbitration (satellite communications): Authored expert report concerning the impact of an alleged breach of contract on lost profits in a 23 country business operation concerning a satellite communications business. Performed detailed financial modeling to determine revenues, net income and net present value using risk adjusted discount rates for a satellite service provider.
- Forensic Analysis and Special Investigation: Directed consulting team and authored report for the forensic analysis of the economics, financial reporting and accounting associated with allegation of accounting and financial improprieties by Global Crossing. Worked on behalf of the Special Committee on Accounting Matters composed of a subset of (and reporting to) the Board of Directors of Global Crossing Ltd. Analysis involved determination of basis for revenue recognition for concurrent (i.e., "swap") transactions. Analysis included in report by the Special Committee entitled "The Concurrent Exchange of Fiber Optic Capacity and Services Between Global Crossing and its Carrier Customers." January 2003.
- Commercial Litigation: Directed expert consulting team in litigation matter concerning the deployment schedule of bandwidth on a major undersea cable project. Case involved allegations of breach of contract. Case work involved modeling of undersea fiber optic bandwidth in major undersea crossings and financial analysis of project viability.
- Forensic Analysis and Securities Litigation: Directed consulting team and led technical analysis concerning accounting and financial disclosure on behalf of the defendant in a class action against corporate officers, directors, controlling shareholders and the company's

outside auditors alleging violations of the Securities Act of 1993 and the Securities Exchange Act of 1934. Scope of case involved accounting and disclosure treatment of complex leases.

- Special Investigations and Audits: Directed project teams, led technical analysis and authored reports in multiple special investigations and audits of management, operations and finance and accounting on behalf of regulatory utility commissions. Special investigations and audits involved allegations of improper cross subsidization and/or transfer pricing practices by regulated utilities (telecommunications, electric and/or natural gas) and their effect on rates charged to consumers. Special investigations and audits were conducted for regulatory commissions in Alabama, Kentucky, Maryland, New York and Pennsylvania.
- Commercial Litigation (broadband communications): Provided expert testimony concerning the estimate of commercial damages stemming from an alleged breach of contract associated with relocating infrastructure assets. Public Service Company of New Mexico vs. Smith Bagley, Inc. and Lite Wave Communications LLC In The United States District Court For The District of New Mexico. March 2007.
- Commercial Litigation (wireline communications): Developed analysis and supported expert testimony concerning damages associated with cable breaks and disruption of wholesale transport services. Analysis involved estimating lost profits and determining replacement cost of temporarily lost capacity. MCI WorldCom Network Services, Inc. v. MasTec, Inc. before the United States District Court Southern District of Florida, Case No. 01-2059-CIV-GOLD. May 2002.

TESTIMONY

Declaration of William Zarakas and Eliana Garces In the Matter of beIN Sports, LLC, Complainant,v. Comcast Cable Comunications, LLC and Comcast Corporation, Defendants, MB Docket No. 18-90.

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